

50	55	60
Asn Ser Ser Thr Glu Ala	Asn Val Ile Lys Glu Ala Leu Asp Ser Ser	
65	70	75
Leu Glu Ser Thr Leu Asp Asn Ser Cys Gln Gly Ala Gln Met Asp Asn		80
	85	90
Lys Ser Glu Val Gln Leu Trp Leu Leu Lys Arg Ile Gln Val Pro Ile		95
	100	105
Glu Asp Ile Leu Pro Ser Lys Glu Glu Lys Ser Lys Thr Pro Pro Met		110
	115	120
Phe Leu Cys Ile Lys Val Gly Lys Pro Met Arg Lys Ser Phe Ala Thr		125
	130	135
His Thr Ala Ala Met Val Gln Gln Tyr Gly Lys Arg Arg Lys Gln Pro		140
	145	150
Glu Tyr Trp Phe Ala Val Pro Arg Glu Arg Val Asp His Leu Tyr Thr		155
	165	170
Phe Phe Val Gln Trp Ser Pro Asp Val Tyr Gly Lys Asp Ala Lys Glu		175
	180	185
Gln Gly Phe Val Val Val Glu Lys Glu Glu Leu Asn Met Ile Asp Asn		190
	195	200
Phe Phe Ser Glu Pro Thr Thr Lys Ser Trp Glu Ile Ile Thr Val Glu		205
	210	215
Glu Ala Lys Arg Arg Lys Ser Thr Cys Ser Tyr Tyr Glu Asp Glu Asp		220
	225	230
Glu Glu Val Leu Pro Val Leu Arg Pro Pro Arg Ala Phe Trp Glu Asn		235
	245	250
Lys Pro Leu Asn Arg Trp Ala Arg Pro Phe Pro Ala Arg Val Gln Gly		255
	260	265
Tyr Pro Trp Arg Leu Ala Tyr Ser Thr Leu Glu His Gly Thr Ser Leu		270
	275	280
Lys Thr Leu Tyr Arg Lys Ser Ala Ser Leu Asp Ser Pro Val Leu Leu		285
	290	295
Val Ile Lys		300
305		

<210> 2763

<211> 2210

<212> DNA

<213> Homo sapiens

<400> 2763

gtgttttttt ttgtgcaaag aaagcttttt atttgagaac acctagatac ttttggaat
60

gttcttggtg gatcacaac aacctaatg acagtctatc gccaacatcc acaaacacag
120

caaacagtcc agtctgcag accacacagg gtacatctag agggttctac ttgcatcacc
180

cacacttcca ctctgtgaa acaactgtct tgggcatgag aagggccagg ataggccagg
240

tgaatggcag gctgccaac aacccaatc ccaaaccaac ctcccaggcc atgggcccac
300

gtccctgcag gaagatgcta ataggtacaa caggtagaac atgtagacac aaacatctag
360

tttatttttt ctgactgtaa ccaaagtcag caaaagaaac aacaaaactt cagtgccta
420

gaaatectcc tggattcaat gacaacacat caatggccgg gcacaggggtt ggattccttt
480
tatgaaatca ccttataatc tctcatcacc ccaggacagt gccttttggg actgcatgaa
540
tctttaatag ctacaccaca ttttctcacc ctttaagtta tgacagacag gttatctctc
600
tccaagagca tcagggttaga tgctctttca ctcttacaaa ctgtcagggtg gagggagaat
660
cacgacatca ttcataaata actgtggagt ctgggatgct ggctgaaggc atctccagga
720
aggactggag ggcgattttg ctaaagggtt gctcactgct cttttcactg catgccgctt
780
ttctcacttt ggttgggagt ttgaaggacc atgtaatcac agagattaga gctccctgtg
840
aatcaatca ctgccttttag atctccacaa agacctgttc tccaatagca catgcgtttc
900
tctgtgagct gtattcgcat cagcgccgga gcctcagaaa gaatgcgtgt ttacactctg
960
tactctccaa tgggtaatat ttatcataga aatctaatac atattcttca gtcttgaatc
1020
caaacttctg gtacagtagc atagcggggt tgcttgctga gacgtgaagg gttacgtcct
1080
tgcccatgca ggtctgaatc agatgataga tcatgaaagt tgcaatccct gctcttctcc
1140
attcaggggtg gacgaacaga aatgaaatgt aagcttcatt gtatttcaca tcaggaacca
1200
tgaagccaaa ggcaatgatg acttttttat aaagaacaac aacactgaag tctgggtact
1260
gcagacactc agacagggtc atgccaggcc aaaaaaactc ctgacacatg gagttgatcg
1320
ttgggatgtg atttggccgc acataacagt aatcgagagg tgcgtcgggc tccggcgctc
1380
agtgagggtc gctcctgtgc aggtgggaac gaatctgtga caggagctgc agtttgggtg
1440
gctttgtttc ataatcacgc ctgatataag gtttcaagat ccgagaggta taagggtga
1500
caatactctg gtccacagcc atatcttctg atcctaccaa gcgatacaaa aacttgggtg
1560
tctgggtgtc aaatcccttc ctggacggca aggaagtctg gtatcggtca aggattctga
1620
agtcctgaca ggtggttctg tacgtggctt gtccagctgg aagtctggaa attcctcctt
1680
ctttggctcc ataaatcccg tcaactaaca aaagagcagc attaacaact tgatccaagt
1740
caaaaagtgg taatccccta tcccttttctg cttgtctgac aatcagtttg cgtttcagtc
1800
tccgagcttc cggagtcag gcaacagcac cgggacaagc ttccagcctc ttgagcagca
1860
gcttttcttc gtagatgctc acgggagtat acctgggctc tttcggcttt gtgtccttct
1920
ccagctgagg cttcctcttt tctctagccc ttgtttgcaa agatgtgttt gaatctgtgt
1980
cttactgtc aatatccacc ctgtcgggtt tttcctctc actctctacc tctgcttta
2040

tctgttcagg gcctctgacc ttctttctgc cccaaccac tggcccagaa gctactgacc
 2100
 cagcaggggg tgggacgtac tccatccctg ggtctatgac tccatgcct tccatctcat
 2160
 cgtcatcatg aaacaaggct tgtgggggca tcacatctgg aatcagatct
 2210

<210> 2764

<211> 423

<212> PRT

<213> Homo sapiens

<400> 2764

Met	Pro	Pro	Gln	Ala	Leu	Phe	His	Asp	Asp	Asp	Glu	Met	Glu	Gly	Asp
1				5					10					15	
Gly	Val	Ile	Asp	Pro	Gly	Met	Glu	Tyr	Val	Pro	Pro	Pro	Ala	Gly	Ser
			20					25					30		
Val	Ala	Ser	Gly	Pro	Val	Val	Gly	Gly	Arg	Lys	Lys	Val	Arg	Gly	Pro
		35					40					45			
Glu	Gln	Ile	Lys	Gln	Glu	Val	Glu	Ser	Glu	Glu	Glu	Lys	Pro	Asp	Arg
	50					55					60				
Met	Asp	Ile	Asp	Ser	Glu	Asp	Thr	Asp	Ser	Asn	Thr	Ser	Leu	Gln	Thr
65					70					75				80	
Arg	Ala	Arg	Glu	Lys	Arg	Lys	Pro	Gln	Leu	Glu	Lys	Asp	Thr	Lys	Pro
			85						90					95	
Lys	Glu	Pro	Arg	Tyr	Thr	Pro	Val	Ser	Ile	Tyr	Glu	Glu	Lys	Leu	Leu
		100						105					110		
Leu	Lys	Arg	Leu	Glu	Ala	Cys	Pro	Gly	Ala	Val	Ala	Met	Thr	Pro	Glu
		115					120					125			
Ala	Arg	Arg	Leu	Lys	Arg	Lys	Leu	Ile	Val	Arg	Gln	Ala	Lys	Arg	Asp
	130					135					140				
Arg	Gly	Leu	Pro	Leu	Phe	Asp	Leu	Asp	Gln	Val	Val	Asn	Ala	Ala	Leu
145					150					155					160
Leu	Leu	Val	Asp	Gly	Ile	Tyr	Gly	Ala	Lys	Glu	Gly	Gly	Ile	Ser	Arg
			165					170						175	
Leu	Pro	Ala	Gly	Gln	Ala	Thr	Tyr	Arg	Thr	Thr	Cys	Gln	Asp	Phe	Arg
			180					185					190		
Ile	Leu	Asp	Arg	Tyr	Gln	Thr	Ser	Leu	Pro	Ser	Arg	Lys	Gly	Phe	Arg
		195					200					205			
His	Gln	Thr	Thr	Lys	Phe	Leu	Tyr	Arg	Leu	Val	Gly	Ser	Glu	Asp	Met
	210					215					220				
Ala	Val	Asp	Gln	Ser	Ile	Val	Ser	Pro	Tyr	Thr	Ser	Arg	Ile	Leu	Lys
225					230					235					240
Pro	Tyr	Ile	Arg	Arg	Asp	Tyr	Glu	Thr	Lys	Pro	Pro	Lys	Leu	Gln	Leu
			245						250					255	
Leu	Ser	Gln	Ile	Arg	Ser	His	Leu	His	Arg	Ser	Asp	Pro	His	Trp	Thr
		260						265					270		
Pro	Glu	Pro	Asp	Ala	Pro	Leu	Asp	Tyr	Cys	Tyr	Val	Arg	Pro	Asn	His
		275					280					285			
Ile	Pro	Thr	Ile	Asn	Ser	Met	Cys	Gln	Glu	Phe	Phe	Trp	Pro	Gly	Ile
	290					295						300			
Asp	Leu	Ser	Glu	Cys	Leu	Gln	Tyr	Pro	Asp	Phe	Ser	Val	Val	Val	Leu
305					310					315					320
Tyr	Lys	Lys	Val	Ile	Ile	Ala	Phe	Gly	Phe	Met	Val	Pro	Asp	Val	Lys

```

          325          330          335
Tyr Asn Glu Ala Tyr Ile Ser Phe Leu Phe Val His Pro Glu Trp Arg
          340          345          350
Arg Ala Gly Ile Ala Thr Phe Met Ile Tyr His Leu Ile Gln Thr Cys
          355          360          365
Met Gly Lys Asp Val Thr Leu His Val Ser Ala Ser Asn Pro Ala Met
          370          375          380
Leu Leu Tyr Gln Lys Phe Gly Phe Lys Thr Glu Glu Tyr Val Leu Asp
          385          390          395          400
Phe Tyr Asp Lys Tyr Tyr Pro Leu Glu Ser Thr Glu Cys Lys His Ala
          405          410          415
Phe Phe Leu Arg Leu Arg Arg
          420

```

<210> 2765
 <211> 582
 <212> DNA
 <213> Homo sapiens

```

<400> 2765
tctgggtgtg gagccttatt attcaccact ttggcaggtg tctcagtggc ttacttaccc
60
ttgttcattcc cactggtgct cggtctgctgg ctggcccaca aacatgttct catagtcggg
120
agtggagggg caggatggca cggccacttg gggcttgggg gcgctccggc tgccgtaccg
180
tggctgcaag cctaaaccgg gcttgggccc atcctgagca gccacaggggt tgttcagctc
240
ccggcttctg gccactcggc atcgccagag tctccaggcc agcacagggc cagcgatggc
300
aagtccaaga agcaggcacc cgctgaccac cactgccccg atagttgcag aggccaggcc
360
aggggcgag ctgacctcca ggaaggcaga gaggttggtg tgggagctgg ttgtgtccca
420
gcagagcaga ggcttctggc cagagcagtt gtctcggcgg atgtcgtgcc aggactccag
480
ggcacagttg cagtcggcct gcaggtcaag gtcacagcgg gcggccagcg ccccatccac
540
acgagacaag gggttgcgta gcacgttcag gacctcaagc tt
582

```

<210> 2766
 <211> 100
 <212> PRT
 <213> Homo sapiens

```

<400> 2766
Met Gly Arg Trp Pro Pro Ala Val Thr Leu Thr Cys Arg Pro Thr Ala
1      5      10      15
Thr Val Pro Trp Ser Pro Gly Thr Thr Ser Ala Glu Thr Thr Ala Leu
20     25     30
Ala Arg Ser Leu Cys Ser Ala Gly Thr Gln Pro Ala Pro Ser Thr Thr
35     40     45
Ser Leu Pro Ser Trp Arg Ser Ala Ala Pro Leu Ala Trp Pro Leu Gln

```

50		55		60	
Leu Ser Gly Gln Trp	Trp Ser Ala Gly Ala Cys	Phe Leu Asp Leu Pro			
65	70	75	80		
Ser Leu Ala Leu Cys	Trp Pro Gly Asp Ser	Gly Asp Ala Glu Trp	Pro		
	85	90	95		
Glu Ala Gly Ser					
	100				

<210> 2767

<211> 1202

<212> DNA

<213> Homo sapiens

<400> 2767

```

gaattcctca ttgataactg ctttgaaata tttggggaga acattccagt gcattccagt
60
atcacttctg atgactccct ggagcacact gacagttcag atgtgtcgac cctgcagaat
120
gactcagcct acgacagcaa cgaccctgat gtggaatcca acagcagcag tggcatcagc
180
tctccagca ggcagcccca ggtgcccattg gccacagctg ctggcttgga tagcgcgggc
240
ccacaggatg cccgagaggt cagcccagag cccattgtga gcaccgtggc caggctgaaa
300
agctccctcg cacagcccga taggagatac tcagagccca gcatgccatc ctcccaggag
360
tgccctcgaga gccgggtgac aaaccaaaca ctaacaaaga gtgaagggga cttccccgtg
420
ccccgggtag gctctcgttt ggaaagttag gaggtgaag acccatttcc agaggaggtc
480
ttccctgcag tgcaaggcaa aaccaagagg ccggtggacc tgaagatcaa gaacttggcc
540
ccgggttcgg tgctcccgcg ggcaactggt ctcaaagcct tctccagcag ctcgctggac
600
gcgtcctctg acagctcgcc cgtggcttct ccttccagtc caaaagaaa tttcttcagc
660
agacatcagt ctttcaccac aaagacagag aaaggcaagc ccagccgaga aattaaaaag
720
cactccatgt ctttcacctt tgcccctcac aaaaaagtgc tgaccaaaaa cctcagcgcg
780
ggctctggga aatcgcaaga ctttaccagg gaccacgtcc cgaggggtgt cagaaaggaa
840
agccagcttg ccggccgaat cgtgcaggaa aatgggtgtg aaaccacaa ccaaacagcc
900
cgcggttctt gcctgagacc ccacgcctc tcggtggatg atgtgttcca gggagctgac
960
tgaggagagg ctggaagccc accctcttat gaagaggcca tgcagggccc ggcagccaga
1020
ctagtggcct cccagcaatt tcaatttcta gcttgacact aaaatgggta tttttcagta
1080
acgggggggag aagtggggag gcagagtgtg aagggaata aaaccaatta gtaattttta
1140
actatcaaat gcactccagc aatcagtcaa aacaggcccg aggaaacctg ttccaactta
1200

```

ag
1202

<210> 2768
<211> 282
<212> PRT
<213> Homo sapiens

<400> 2768
Met Ala Thr Ala Ala Gly Leu Asp Ser Ala Gly Pro Gln Asp Ala Arg
1 5 10 15
Glu Val Ser Pro Glu Pro Ile Val Ser Thr Val Ala Arg Leu Lys Ser
20 25 30
Ser Leu Ala Gln Pro Asp Arg Arg Tyr Ser Glu Pro Ser Met Pro Ser
35 40 45
Ser Gln Glu Cys Leu Glu Ser Arg Val Thr Asn Gln Thr Leu Thr Lys
50 55 60
Ser Glu Gly Asp Phe Pro Val Pro Arg Val Gly Ser Arg Leu Glu Ser
65 70 75 80
Glu Glu Ala Glu Asp Pro Phe Pro Glu Glu Val Phe Pro Ala Val Gln
85 90 95
Gly Lys Thr Lys Arg Pro Val Asp Leu Lys Ile Lys Asn Leu Ala Pro
100 105 110
Gly Ser Val Leu Pro Arg Ala Leu Val Leu Lys Ala Phe Ser Ser Ser
115 120 125
Ser Leu Asp Ala Ser Ser Asp Ser Ser Pro Val Ala Ser Pro Ser Ser
130 135 140
Pro Lys Arg Asn Phe Phe Ser Arg His Gln Ser Phe Thr Thr Lys Thr
145 150 155 160
Glu Lys Gly Lys Pro Ser Arg Glu Ile Lys Lys His Ser Met Ser Phe
165 170 175
Thr Phe Ala Pro His Lys Lys Val Leu Thr Lys Asn Leu Ser Ala Gly
180 185 190
Ser Gly Lys Ser Gln Asp Phe Thr Arg Asp His Val Pro Arg Gly Val
195 200 205
Arg Lys Glu Ser Gln Leu Ala Gly Arg Ile Val Gln Glu Asn Gly Cys
210 215 220
Glu Thr His Asn Gln Thr Ala Arg Gly Phe Cys Leu Arg Pro His Ala
225 230 235 240
Leu Ser Val Asp Asp Val Phe Gln Gly Ala Asp Trp Glu Arg Pro Gly
245 250 255
Ser Pro Pro Ser Tyr Glu Glu Ala Met Gln Gly Pro Ala Ala Arg Leu
260 265 270
Val Ala Ser Gln Gln Phe Gln Phe Leu Ala
275 280

<210> 2769
<211> 1286
<212> DNA
<213> Homo sapiens

<400> 2769
atctgcaaca tgtacaccat gtacagcatg atgaacgtcg gccagacagc cgagaaggtg
60

gaggccctcc cggagcaggt agcccccgag tcccgaatc gcatccgggt tcggcaagac
 120
 ctggcgtctc tcccggctga acttatcaac cagattggga accgctgcca cccaagctc
 180
 tacgacgagg gcgaccctc tgagaagctg gagctggtga caggcaccaa cgtgtacatc
 240
 acaagggcgc agctgatgaa ctgccacgtc agcgcaggca cgcggcacaa ggtcctactg
 300
 cggcggctcc tggcctcctt ctttgaccgg aacacgctgg ccaacagctg cggcaccggc
 360
 atccgctctt ctaccaacga tccccgtcgg aagccccctgg acagccgctg gctccacgct
 420
 gtcaagtact actgccagaa cttcgcccc aacttcaagg agagcgagat gaatgccatc
 480
 gcggccgaca tgtgcaccaa cgcccgccgc gtcgtgcgca agagctggat gcccaaggtc
 540
 aaggtgctca aggctgagga tgacgcctac accaccttca tcagtgaac gggcaagatc
 600
 gagccggaca tgatgggtgt ggagcatggc ttcgagaccg ccagccacga gggcgaggcg
 660
 ggtcccatcg ctgaagccct gcagtaacct gcccgacctc ccgcggggcc gcacacttec
 720
 cctcccaaca cacacacaca cctgccatct tggtcatgag ctactgtctg tccctcccca
 780
 ggacccgcgg tgggtgctgc atgttcccgg ccctctgccc ctctgtcctt acccccttcc
 840
 cccaccgaga gctgggcccgg gagaggaccg cagggcaggt ggcgtgaggt ccgtgttgcc
 900
 ttctttaaca cacactcgtg cagtggggga gttctggctc cccaacctaa cccctagccg
 960
 tcactctcac actcaccagg cccaccaggg gagggggctg gcctgggggt cttgggaagg
 1020
 cccctcccca ggccnaggc cacctcgcgg aagccttcag cctccgcccc tcaactgcagc
 1080
 cccttgggac ttgagggggg ccccaggggt tctcaggacc cctcccacca cctcccagtg
 1140
 cttccacgtc tccaaaagcg ctttctgtc accctcgtct atccctgcgc ctgggggctg
 1200
 gggtaggcga ggccgtgggg actaccatt ttatagctgg ggaaacaggc tccgagaaat
 1260
 tgcacaaccg acctcaggtg gccggc
 1286

<210> 2770

<211> 228

<212> PRT

<213> Homo sapiens

<400> 2770

Ile	Cys	Asn	Met	Tyr	Thr	Met	Tyr	Ser	Met	Met	Asn	Val	Gly	Gln	Thr
1					5				10					15	
Ala	Glu	Lys	Val	Glu	Ala	Leu	Pro	Glu	Gln	Val	Ala	Pro	Glu	Ser	Arg
			20					25					30		
Asn	Arg	Ile	Arg	Val	Arg	Gln	Asp	Leu	Ala	Ser	Leu	Pro	Ala	Glu	Leu

35 40 45
 Ile Asn Gln Ile Gly Asn Arg Cys His Pro Lys Leu Tyr Asp Glu Gly
 50 55 60
 Asp Pro Ser Glu Lys Leu Glu Leu Val Thr Gly Thr Asn Val Tyr Ile
 65 70 75 80
 Thr Arg Ala Gln Leu Met Asn Cys His Val Ser Ala Gly Thr Arg His
 85 90 95
 Lys Val Leu Leu Arg Arg Leu Leu Ala Ser Phe Phe Asp Arg Asn Thr
 100 105 110
 Leu Ala Asn Ser Cys Gly Thr Gly Ile Arg Ser Ser Thr Asn Asp Pro
 115 120 125
 Arg Arg Lys Pro Leu Asp Ser Arg Val Leu His Ala Val Lys Tyr Tyr
 130 135 140
 Cys Gln Asn Phe Ala Pro Asn Phe Lys Glu Ser Glu Met Asn Ala Ile
 145 150 155 160
 Ala Ala Asp Met Cys Thr Asn Ala Arg Arg Val Val Arg Lys Ser Trp
 165 170 175
 Met Pro Lys Val Lys Val Leu Lys Ala Glu Asp Asp Ala Tyr Thr Thr
 180 185 190
 Phe Ile Ser Glu Thr Gly Lys Ile Glu Pro Asp Met Met Gly Val Glu
 195 200 205
 His Gly Phe Glu Thr Ala Ser His Glu Gly Glu Ala Gly Pro Ile Ala
 210 215 220
 Glu Ala Leu Gln
 225

<210> 2771

<211> 1668

<212> DNA

<213> Homo sapiens

<400> 2771

gtgatctgca tgtggcaggg ctgcgcagtg gagcgccag tgggcaggat gacgagccag
 60
 acccctctgc cccagtcgcc cgggccaggg cggccaacga tgtctactgt tgtggagctg
 120
 aacgtcgggg gtgagttcca caccaccacc ctgggtaccc tgaggaagtt tccgggctca
 180
 aagctggcag agatgttctc tagcttagcc aaggcctcca cggacgcgga gggccgcttc
 240
 ttcatcgacc gccccagcac ctatttcaga cccatcctgg actacctgcg cactgggcaa
 300
 gtgcccacac agcacatccc tgaagtgtac cgtgaggctc agttctacga aatcaagcct
 360
 ttgggtcaagc tgctggagga catgccacag atctttgggtg agcaggtgtc tcggaagcag
 420
 tttttgctgc aagtgccggg ctacagcgag aacctggagc tcatggtgcg cctggcacgt
 480
 gcagaagcca taacagcacg gaagtccagc gtgcttgtgt gcctggtgga aactgaggag
 540
 caggatgcat attattcaga ggtcctgtgt tttctgcagg ataagaagat gttcaagtct
 600
 gttgtcaagt ttgggccctg gaaggcggtc ctagacaaca ggcacctcat gcactgcctg
 660

gagatggaca ttaaggccca ggggtacaag gtattctcca agttctacct gacgtacccc
 720
 accaaaagaa acgaattcca ttttaacatt tattcattca cttcacctg gtggatgacc
 780
 tcaggagcag agactgttat gaattctggc gtggcttatg aaattaaaag ttgccatcaa
 840
 agccattttc ttttaatttc acaaacatca ggcaatttcc agggttgggc tagagtcttg
 900
 ccactaaata ttgatcactc gtttaaggac tttccactcc attgcaactg atgccactat
 960
 atttgcctag caacttgcag cttcttcctt ttcaaagcct catgtatctc ccagaccctt
 1020
 ctcttgaagt ccaataacaa gaccaagtaa gaatgtttca acaatgcgtt ggcaagagat
 1080
 gtgagatgac aacaggaaca tacaagatac tgtgaatcta gatgttctga cctaaagatg
 1140
 tagtctacat agccccagct tgggggtccaa tccatctgtc cctggcatgt gccttcatgt
 1200
 agtaggtgct ttcctgatcc cctttgcgag atgctgtggg tgctaacacc tcagagctgt
 1260
 cctcttctct agagtggagg ttttcaaagt gcatcatcag cattacctgt gaacttctgt
 1320
 gaaatacaaa tcctcaggcc ccacctcaga cctactgaat cagaatctct ggggggtggc
 1380
 acagcattct gatttaccaa accctccaag tgattttgat gtatttctaat tttgagacca
 1440
 tctctagaaa agaattgcta cctcttgat ggaggtacaa aagactgacc tcttacatca
 1500
 aggaacttcc tttccagag ctctcatgg aatcaagctg aagtcagtct tcttctgaga
 1560
 gcacattctt actcagtttt tttcctctgt cctacgtgtc ttccctcact ccccttctcc
 1620
 taagagcact ccatcaataa accacttgca cgagaaaaaa aaaacaaa
 1668

<210> 2772

<211> 258

<212> PRT

<213> Homo sapiens

<400> 2772

Val	Ile	Cys	Met	Trp	Gln	Gly	Cys	Ala	Val	Glu	Arg	Pro	Val	Gly	Arg
1				5					10					15	
Met	Thr	Ser	Gln	Thr	Pro	Leu	Pro	Gln	Ser	Pro	Arg	Pro	Arg	Arg	Pro
			20					25					30		
Thr	Met	Ser	Thr	Val	Val	Glu	Leu	Asn	Val	Gly	Gly	Glu	Phe	His	Thr
			35				40					45			
Thr	Thr	Leu	Gly	Thr	Leu	Arg	Lys	Phe	Pro	Gly	Ser	Lys	Leu	Ala	Glu
			50			55					60				
Met	Phe	Ser	Ser	Leu	Ala	Lys	Ala	Ser	Thr	Asp	Ala	Glu	Gly	Arg	Phe
65				70					75					80	
Phe	Ile	Asp	Arg	Pro	Ser	Thr	Tyr	Phe	Arg	Pro	Ile	Leu	Asp	Tyr	Leu
			85				90						95		
Arg	Thr	Gly	Gln	Val	Pro	Thr	Gln	His	Ile	Pro	Glu	Val	Tyr	Arg	Glu

100	105	110
Ala Gln Phe Tyr Glu Ile Lys Pro Leu Val Lys Leu Leu Glu Asp Met		
115	120	125
Pro Gln Ile Phe Gly Glu Gln Val Ser Arg Lys Gln Phe Leu Leu Gln		
130	135	140
Val Pro Gly Tyr Ser Glu Asn Leu Glu Leu Met Val Arg Leu Ala Arg		
145	150	155
Ala Glu Ala Ile Thr Ala Arg Lys Ser Ser Val Leu Val Cys Leu Val		
165	170	175
Glu Thr Glu Glu Gln Asp Ala Tyr Tyr Ser Glu Val Leu Cys Phe Leu		
180	185	190
Gln Asp Lys Lys Met Phe Lys Ser Val Val Lys Phe Gly Pro Trp Lys		
195	200	205
Ala Val Leu Asp Asn Ser Asp Leu Met His Cys Leu Glu Met Asp Ile		
210	215	220
Lys Ala Gln Gly Tyr Lys Val Phe Ser Lys Phe Tyr Leu Thr Tyr Pro		
225	230	235
Thr Lys Arg Asn Glu Phe His Phe Asn Ile Tyr Ser Phe Thr Phe Thr		
245	250	255
Trp Trp		

<210> 2773

<211> 593

<212> DNA

<213> Homo sapiens

<400> 2773

nacagtcaga caggggaatga tgaagaggct ttcgactttt ttgaggagca agaccaagtg
 60
 gcagaagagg gtccgcccgt ccagagcctg aagggcgagg atgctgagga atccttggag
 120
 gaggaggagg cgctggaccc tctgggcatt atgcgctcca agaagcccaa gaaacatccc
 180
 aaagtggccg tgaaagccaa gccctcgccc cggctcacca tctttgacga ggaggtggac
 240
 cctgatgagg ggctcttttg cccgggcagg aagctgtctc cacaggaccc ctcggaggac
 300
 gtgtcatcca tggacccctt gaagctatct gatgatcctg acctcggcgg ggccatcccc
 360
 ctgggtgact cctcctgct gccggccgcc tgtgagagtg gagggccac acccagcctc
 420
 agccacaggg acgcctccaa ggaactgttc agacaaattc aaaaagagcc gtaacactgg
 480
 gattagcttc ttgagagcag gaaccacatt cattctttgt gtctgccctg tgactatcca
 540
 gggagtagtt ggacttcctc ataataaaga atgttctgat agccaaaaaa aaa
 593

<210> 2774

<211> 157

<212> PRT

<213> Homo sapiens

<400> 2774

Xaa Ser Gln Thr Gly Asn Asp Glu Glu Ala Phe Asp Phe Phe Glu Glu
 1 5 10 15
 Gln Asp Gln Val Ala Glu Glu Gly Pro Pro Val Gln Ser Leu Lys Gly
 20 25 30
 Glu Asp Ala Glu Glu Ser Leu Glu Glu Glu Ala Leu Asp Pro Leu
 35 40 45
 Gly Ile Met Arg Ser Lys Lys Pro Lys Lys His Pro Lys Val Ala Val
 50 55 60
 Lys Ala Lys Pro Ser Pro Arg Leu Thr Ile Phe Asp Glu Glu Val Asp
 65 70 75 80
 Pro Asp Glu Gly Leu Phe Gly Pro Gly Arg Lys Leu Ser Pro Gln Asp
 85 90 95
 Pro Ser Glu Asp Val Ser Ser Met Asp Pro Leu Lys Leu Phe Asp Asp
 100 105 110
 Pro Asp Leu Gly Gly Ala Ile Pro Leu Gly Asp Ser Leu Leu Leu Pro
 115 120 125
 Ala Ala Cys Glu Ser Gly Gly Pro Thr Pro Ser Leu Ser His Arg Asp
 130 135 140
 Ala Ser Lys Glu Leu Phe Arg Gln Ile Gln Lys Glu Pro
 145 150 155

<210> 2775

<211> 3139

<212> DNA

<213> Homo sapiens

<400> 2775

nacgcgtgtg tgctagtgag ccggagccgg cgacggcggc agtggcgggc cggcctgcag
 60
 gagcccgacg ggggtctctgc catgggggag tgacgcgcct gcacccgctg ttccgcggca
 120
 gcggcgagac atgaggagac cccgcgacag gggcagcggc ggcggctcgt gagccccggg
 180
 atggaggaga aatacggcgg ggacgtgctg gccggccccg gcggcgggcg cggccttggg
 240
 ccggtggacg taccagcgc tcgattaaca aaatatattg tgttactatg tttcactaaa
 300
 tttttgaagg ctgtgggact ttctgaatca tatgatctcc taaaagctgt tcacattgtt
 360
 cagttcattt ttatattaaa acttgggact gcatttttta tggttttggt tcaaaagcca
 420
 ttttcttctg ggaaaactat taccaaacac cagtggatca aaatatttaa acatgcagtt
 480
 gctgggtgta ttatttcaact cttgtgggtt tttggcctca ctctttgtgg accactaagg
 540
 actttgctgc tatttgagca cagtgatatt gttgtcattt cactactcag tgttttgttc
 600
 accagttctg gaggaggacc agcaaagaca aggggagctg cttttttcat tattgctgtg
 660
 atctgtttat tgctttttga caatgatgat ctcatggcta aaatggctga acaccgtatc
 720
 cttttggaat agatcagagt tgttttcaagt cttgaggaaa actagaagca ggggtggagta
 780

ttattgctag tactggcttt gtgttgtaaa gttggttttc atacagcttc cagaaagctc
840
tctgtcgacg ttggtggagc taaacgtctt caagctttat ctcatcttgt ttctgtgctt
900
ctcttggtgcc catgggtcat tgttctttct gtgacaactg agagtaaagt ggagtcttgg
960
ttttctctca ttatgccttt tgcaacgggt atcttttttg tcatgatcct ggatttctac
1020
gtggattcca ttgttcagc caaaatggaa gtttccaaat gtgctcgta tggatccttt
1080
cccatTTTTA ttagtgctct cctttttgga aatttttgga cacatccaat aacagaccag
1140
cttcgggcta tgaacaaagc agcacaccag gagagcactg aacacgtcct gtctggagga
1200
gtggtagtga gtgctatatt cttcattttg tctgccaata tcttatcatc tccctctaag
1260
agaggacaaa aaggtaccct tattggatat tctcctgaag gaacacctct ttataacttc
1320
atgggtgatg cttttcagca tagctctcaa tcatcccta gggttattaa ggaatcacta
1380
aaacaaattc ttgaggagag tgactctagg cagatctttt acttcttggtg cttgaatctg
1440
ctttttacct ttgtggaatt attctatggc gtgctgacca atagtctggg cctgatctcg
1500
gatggattcc acatgctttt tgactgctct gctttagtca tgggactttt tgctgcctg
1560
atgagtaggt ggaaagccac tcggattttc tcctatgggt acggccgaat agaaattctg
1620
tctggattta ttaatggact ttttctaata gtaatagcgt tttttgtgtt tatggagtca
1680
gtggctagat tgattgatcc tccagaatta gacactcaca tgtaaacacc agtctcagtt
1740
ggagggctga tagtaaacct tattgggtatc tgtgccttta gccatgcca tagccatgcc
1800
catggagctt ctcaaggaag ctgtcactca tctgatcaca gccattcaca ccatatgcat
1860
ggacacagt accatgggca tggtcacagc cacggatctg cgggtggagg catgaatgct
1920
aacatgaggg gtgtaatttc tacatgtttt ggcagatact cttggcagca ttggtgtgat
1980
cgtatccaca gtcttataga gcagtttgga tggttcatcg ctgactctac tctgttctct
2040
ttttattgct atattaatat ttctcagtg tgttccactg attaaagatg cctgccaggt
2100
tctactcctg agattgccac cagaatatga aaaagaacta catattgctt tagaaaagat
2160
acagaaaatt gaaggattaa tatcataccg agaccctcat ttttggcgtc attctgctag
2220
tattgtggca ggaacaattc atatacaggt gacatctgat gtgctagaac aaagaatagt
2280
acagcagggt acaggaatac ttaaagatgc tggagtaaac aatttaacaa ttcaagtgga
2340
aaaggaggca tactttcaac atatgtctgg cctaagtact ggatttcatg atgttctggc
2400

tatgacaaaa caaatggaat ccatgaaata ctgcaaagat ggtacttaca tcattgtgaga
 2460
 taactcaaga attacccttg gagaataaac aatgaagatt aaatgactca gtatttgtaa
 2520
 tattgccaga aggataaaaa ttacacatta actgtacaga aacagagttc cctactactg
 2580
 gatcaaggaa tcttttcttga aggaaattta aatacagaat gaaacattaa tggtaaaagt
 2640
 ggagtaatta tttaaattat gtgtataaaa ggaatcaaat tttgagtaaa catgatgtat
 2700
 tacatcatct tcaaaaatag atatgatgga ttctagttaa gacccaaaatt acttctgttt
 2760
 actttctatc aggaagcatc tccattgtaa atatgtattt acatgtttat tacaaagacc
 2820
 caaatgaaaa attttttagtc catttttttgc atagcctaaa gataaaatag gaataaaagt
 2880
 tctatattta tggattttct gtatataaaa ctgggtttcta attataactt aagtcatta
 2940
 agtaaaatct gtattgccac tttaaatgta aactaaatta tttgggagaa acttcaacca
 3000
 ctgatatgag ataagcaatg agaataggga agtgtataac atcacagttt ttgatgtatt
 3060
 acaaaaatca accactctat aaaataaatt ttttttactt ttggtaaaaa aaaaaaaaaa
 3120
 aaaaaaaaaa aaaaaaaaaa
 3139

<210> 2776

<211> 370

<212> PRT

<213> Homo sapiens

<400> 2776

Met	Pro	Phe	Ala	Thr	Val	Ile	Phe	Phe	Val	Met	Ile	Leu	Asp	Phe	Tyr
1				5					10					15	
Val	Asp	Ser	Ile	Cys	Ser	Val	Lys	Met	Glu	Val	Ser	Lys	Cys	Ala	Arg
			20					25					30		
Tyr	Gly	Ser	Phe	Pro	Ile	Phe	Ile	Ser	Ala	Leu	Leu	Phe	Gly	Asn	Phe
			35				40					45			
Trp	Thr	His	Pro	Ile	Thr	Asp	Gln	Leu	Arg	Ala	Met	Asn	Lys	Ala	Ala
			50			55					60				
His	Gln	Glu	Ser	Thr	Glu	His	Val	Leu	Ser	Gly	Gly	Val	Val	Val	Ser
65					70				75					80	
Ala	Ile	Phe	Phe	Ile	Leu	Ser	Ala	Asn	Ile	Leu	Ser	Ser	Pro	Ser	Lys
				85				90					95		
Arg	Gly	Gln	Lys	Gly	Thr	Leu	Ile	Gly	Tyr	Ser	Pro	Glu	Gly	Thr	Pro
			100					105					110		
Leu	Tyr	Asn	Phe	Met	Gly	Asp	Ala	Phe	Gln	His	Ser	Ser	Gln	Ser	Ile
			115				120					125			
Pro	Arg	Phe	Ile	Lys	Glu	Ser	Leu	Lys	Gln	Ile	Leu	Glu	Glu	Ser	Asp
			130			135					140				
Ser	Arg	Gln	Ile	Phe	Tyr	Phe	Leu	Cys	Leu	Asn	Leu	Leu	Phe	Thr	Phe
145				150				155					160		
Val	Glu	Leu	Phe	Tyr	Gly	Val	Leu	Thr	Asn	Ser	Leu	Gly	Leu	Ile	Ser

165 170 175
 Asp Gly Phe His Met Leu Phe Asp Cys Ser Ala Leu Val Met Gly Leu
 180 185 190
 Phe Ala Ala Leu Met Ser Arg Trp Lys Ala Thr Arg Ile Phe Ser Tyr
 195 200 205
 Gly Tyr Gly Arg Ile Glu Ile Leu Ser Gly Phe Ile Asn Gly Leu Phe
 210 215 220
 Leu Ile Val Ile Ala Phe Phe Val Phe Met Glu Ser Val Ala Arg Leu
 225 230 235 240
 Ile Asp Pro Pro Glu Leu Asp Thr His Met Leu Thr Pro Val Ser Val
 245 250 255
 Gly Gly Leu Ile Val Asn Leu Ile Gly Ile Cys Ala Phe Ser His Ala
 260 265 270
 His Ser His Ala His Gly Ala Ser Gln Gly Ser Cys His Ser Ser Asp
 275 280 285
 His Ser His Ser His His Met His Gly His Ser Asp His Gly His Gly
 290 295 300
 His Ser His Gly Ser Ala Gly Gly Gly Met Asn Ala Asn Met Arg Gly
 305 310 315 320
 Val Ile Ser Thr Cys Phe Gly Arg Tyr Ser Trp Gln His Trp Cys Asp
 325 330 335
 Arg Ile His Ser Leu Ile Glu Gln Phe Gly Trp Phe Ile Ala Asp Ser
 340 345 350
 Thr Leu Phe Ser Phe Tyr Cys Tyr Ile Asn Ile Ser Gln Cys Cys Ser
 355 360 365
 Thr Asp
 370

<210> 2777

<211> 8625

<212> DNA

<213> Homo sapiens

<400> 2777

tcatgagcat ctcatTTTca ccattggaat cataaaattg gaagtcttgt atgaattctt
 60
 tctcagtcct gattctttcc ttgttctctt tgcttatagg tggTTTTcgg atggTTTacc
 120
 cttcagcatt tgTTTgatTC ttctcagaat gacatcccgg ttcctcagag tgttgccagt
 180
 gctggagacc acattgcagt tgggcagcaa gggcttggtg gtgtgaagga cccaaataac
 240
 tgtgggatgc ctctgacccc tcccacctct ccagaacagg ctatcctagg tgagagtgga
 300
 ggtatgcaga gtgctgccag tcacctggtt tccaagatg gagggatgat aacgatgcac
 360
 agtccaaaga gatcggggaa gattcctcca aaactccaca atcatatggt ccatcgagtc
 420
 tggaaggaat gcatacctcaa cagaaccag tccaagagga gccaaatgtc aactccaact
 480
 cttgaagaag agcctgctag caatcctgct acttgggatt ttgtggatcc aacccaaaga
 540
 gtcagctgtt cttgttccag gcataagctt ttaaaacgtt gtgcagtcgg gcccaatcga
 600

cctcccacag tatctcaacc aggggttcagt gcaggaccat catcatcttc atctttacca
660
cctcctgctt cttctaagca caaaacagca gaaagacagg aaaaaggaga caagctgcaa
720
aagagaccct taataccatt tcaccatagg ccctctgtgg ccgaagaatt atgcatggag
780
caagatacac caggacagaa actaggggtt gcagggatag actcctcctt agagggtgtct
840
agcagtagga aatatgataa gcaaattggc gtgccttcca gaaatacaag caagcaaattg
900
aatctgaatc ctatggattc acctcattcc cctatatccc ctctgccacc aacactcagc
960
cctcagccac gaggtcagga aacagagagt ttggaccac catcggtccc tgtgaatcca
1020
gccctttatg gaaatggact agaactccag cagttgtcta ctctggatga cagaactgtc
1080
ctcgtaggcc aaagactgcc tctcatggca gaggtcagcg agacagcctt atattgtggg
1140
attagccct cgaaccgga gtcacagaa aagtgggtggc atagttatcg tctcccaccc
1200
agtgatgatg ctgagttcag gcctccagag ctccagggtg agagatgtga tgccaaaatg
1260
gaggtaaact cagagagcac tgcattgcaa agactcttag cacaacctaa caaacggttt
1320
aaaatctggc aagacaaaca gcccagttg cagccactcc acttccttga cccattgcct
1380
ctatcacaac aacctggaga cagtttggga gaagtgaatg acccatatac ctttgaagat
1440
ggtgacataa aatacatctt tacagccaac aagaaatgca aacaaggagc ggagaaagat
1500
tcctgaaaa agaataagtc agaggatgga tttggtacca aggatgtcac tacaccaggt
1560
cattccacgc cgggtgcctga tgggaaaaat gccatgtcta ttttcagttc tgctactaaa
1620
acagatgtcc ggcaggataa tgctgctggc agagctggct ccagtagcct tacacaggt
1680
acagatttgg caccttcctt gcatgactta gacaacatct ttgataattc tgatgacgac
1740
gaacttgggg ctgtatcacc tgctctgcgc tcatcaaaaa tgccctgcagt tgggacagaa
1800
gaccgacctc ttgggaagga tggaagagct gctgttcctt atccaccaac agttgcagac
1860
ttgcaaagga tgtttccac tccaccatct ttggaacagc atcctgcatt ttctcctgtg
1920
atgaattata aagatgggat cagctcagag acagtgacag cattagggcat gatggagagc
1980
cctatggtca gtatggtttc aacacaactc acagaattca aaatggaagt ggaagatgga
2040
ttaggaagtc ccaagcccga ggaaattaag gacttttcat atgtgcacaa agttccatcc
2100
tttcaacctt ttgtgggatc ctccatgttt gctccactga agatgttgcc gagccattgt
2160
ttgctacctc tgaagatacc tgatgcctgt ctgtttcggc cttcatgggc aattcctcct
2220

aaaattgaac aactgcccac gccccctgca gccactttca ttagagatgg ctacaataac
2280
gtgcctagtgt ttgggagcct agcagatcca gactatctga acacaccaca gatgaacaca
2340
cccgtgacgt tgaacagcgc tgccccagcc agcaatagtgt gggcaggagt cctaccatct
2400
ccagcaaccc ctgcgtttctc tgtccccaca ccacgaaccc ccaggacccc aagaactccc
2460
agaggtgggg gcaactgccag tggtaagggt tctgttaagt atgatagcac cgatcaagga
2520
tcaccagcct ccaccccctc tactacacgg cccctcaact ctgtggagcc cgccaccatg
2580
cagccaattc ccgaagccca cagcctctat gttaccctga ttctctccga ttccgtgatg
2640
aatatcttta aagacagaaa ctttgacagc tgttgcatct gtgcctgcaa catgaacac
2700
aaagggggcgg atgtcgggct ttacatcccc gattcttcca atgaggacca gtaccgctgt
2760
acctgtgggt ttagtgcat tatgaaccgc aaacttggct acaattcagg actcttcctt
2820
gaagatgagt tggatatttt tgggaagaat tctgatattg gtcaggctgc agagaggcgc
2880
ttaatgatgt gtcagtccac ctctcttctt cagggtggaag gaacccaaaa accccaggag
2940
ccaccataa gccttctctt cctctctcag aatcaacaca cacaaccttt tgcttccactg
3000
aatttcttgg actacatttc ctctaacaat cgccaaactc ttccctgtgt aagctggagt
3060
tatgaccggg tgcaagcaga taataatgat tactggacgg aatgctttaa tgcgttggag
3120
cagggggcggc agtatgtgga taaccccact ggtggaaaag tggacgaagc tctggtgaga
3180
agtgccactg tgcactcttg gcctcacagc aatgtgctgg acatcagcat gctctctctc
3240
caggatgtgg ttcgtatgct gttgtccctg cagcccttcc tccaagatgc catccaaaag
3300
aagcgacggg gcaggacctg ggagaacatc cagcatgtgc agggaccact cacttggcag
3360
cagttccata aaatggcagg acggggaacc tacggttcgg aagaatctcc tgagccgttg
3420
ccatcccca ctctgctggg aggcctatgac aaggatttcc tcaccatctc gccattctcc
3480
ttgccgtttt gggagaggct cttgttggac ccatatgggg gccaccgtga tgttgctat
3540
attgtggtgt gtccagaaaa tgaggccttg ctggaaggag ccaaaacttt cttcagggac
3600
ttgagtgtgt tatacgagat gtgtaggctt gggcagcaca agcccatctg caaagtgcta
3660
cgtgacggga tcatgcgcgt gggaaaaact gtggcacaga agctgacaga tgagcttgtg
3720
agtgagtggg ttaaccagcc ttggagcggc gaggagaatg acaatcattc cagactcaaa
3780
ctttatgcgc aagtttgccg ccacaccta gcaccttatt tagccactct gcagcttgat
3840

agcagcctat tgataccacc taaataccag accccaccag cagcagcaca gggacaagct
3900
acgccagga atgctgggcc cttagctcca aatggatcag cagctcccc agctggcagt
3960
gcatttaatc ccacctcgaa tagtagttct acaaatcctg cagcaagtag ttctgcatct
4020
ggttcctctg tgccaccggt ctcacgtctt gcctctgctc ctggtattag ccagataagc
4080
actacctctt cttcaggatt cagtggtagt gttggagggc agaaccacag cactgggggc
4140
atttctgcgg atagaacgca acggaacata ggctgtggtg gagacactga ccctgggcag
4200
agctcttctc agccctcaca ggatggacaa gagagtgtta cagaaagga gagaatagga
4260
attcccacgg agcctgactc tgcagacagc catgcccacc ctccagctgt tgtcatttac
4320
atgggtggacc cgttcacgta tgctgcagag gaggactcca cttctgggaa cttttggctg
4380
ttgagcttga tgcgctgcta cacagaaatg ctggataatt tacctgagca tatgagaaat
4440
tctttcattc tccagattgt gccttgccag tacatgctgc agacaatgaa ggatgagcaa
4500
gttttctaca ttcaatactt gaagtccatg gcattttcag tgtactgcca gtgcaggcga
4560
ccactgccta cacagatcca cattaaatcc ctcacgggat ttgggcctgc agccagcatt
4620
gagatgacct tcaagaacct tgagcggccc agcccaatcc agctttactc cctcccttt
4680
atattggccc caatcaaaga caagcagaca gagctgggag agacgtttgg tgaggcgagc
4740
cagaaataca atgtgctctt cgtgggctat tgtctgtctc acgaccagcg ctggcttttg
4800
gcttcttgca ctgacctcca tggggaatta ttagagacct gcgttgtaaa tattgcttta
4860
ccaacaggt cacggaggag taaagtatct gcacgtaaaa ttggactaca gaagtatgg
4920
gagtggtgca tagggattgt ccaaagaca tctctaccct ggagagtgtt aatcgggcga
4980
cttgggcgtc ttggccatgg ggagcttaaa gattggagta tcctccttgg agaagtgtca
5040
ctacagacaa tcagcaaaaa gctcaaggat gtgtgccgga tgtgtggaat ctctgccgca
5100
gactctcctt ctatccttag tgctgcctg gttgccatgg agccccaggg gtcctttgta
5160
gtgatgccag atgctgtcac aatgggctct gtttttggcc gaagtactgc actgaacatg
5220
cagtcacttc agctcaacac ccctcaagat gcttcttgta cacacatctt ggtgttccca
5280
acatcatcaa ccattccagg ggtccagcc aactaccca atgaagatgg gtttagcccc
5340
aacaatgatg atatgtttgt tgaccttcca tcccagatg atatggacaa tgatattggc
5400
atattaatga ctgggaacct ccattcctct cccaactctt cccagtacc ctcccaggc
5460

tctccttctg gaattggtgt gggctctcac ttccagcata gtcggagcca gggtagcgt
5520
cttctttcta gagaagcacc agaggagcta aagcagcagc ccctggccct tgggtatttt
5580
gtatcaactg ccaaagctga gaatcttccc cagtgggtttt ggtcatcgtg tccccaggct
5640
caaaaccagt gccctctctt cttaaaggct tcgctgcac accacatttc agtagcacag
5700
acagacgaac ttctgcctgc caggaattct cagcgggttc cacaccctct tgactccaaa
5760
accacgtcgg atgttttaag gtttgttttg gagcagtaca acgctctgtc ctggctcacg
5820
tgcaatccgg ccaccagga ccgtacttcc tgccttcccg tccactttgt ggtgctcact
5880
cagttgtaca atgccatcat gaatatactt taattggaaa agcacttggt ctctctggct
5940
cagttccttc tcoctgcaac ctacgtccaa ggaacctgct acactctgca aataaccac
6000
atccttttct tcagaccact ctccacagtc ctgcactgtg attccttctc agcaggcaca
6060
tgtcaattct gcagtgttca ttaccagagt gactccttga cacttctctc atggacctgg
6120
aaacttccat aagtgggtgac ttccagccag tgcgggtggtg tgtgtagccc caacctagg
6180
tccccaggaa gtgggtgggtg ttgatggctt ttcagcggga aacagaagag acagtgtcct
6240
tttgacaaag agtctgtgtt ttcagcctct gtatacaatt gagggcagtc tagccctttg
6300
gatgaaatcc tcttagttac tgggtgtatgg cctgtgggtt acctgaactc cataatcggg
6360
gactttttaa aaataagaac cagctcaagt acatgggtttc atactgggggt ttctgtctcc
6420
ctagtgttcc catccagatt agcatgagtg ctttggttga cttcaaacct gtgtgtcaat
6480
gcagaaggtc tggagacagc ttcatTTTgt ttatttattt taatttgttt tgtcatatgg
6540
tttttTgtgac ttattttttt taattcacia ggaccaggta cagtagctga aaccacattc
6600
agatccacca taggattctt tgactacata cctctgtcct agaagccgga aaaggagtaa
6660
aaacacattg gggagatcat gcctaaaagt aatatattca aaaccacca gcagtaggtt
6720
ttgttaacia caaactggat tttaaaagt ctgccatgtt aagtggccag catttcatga
6780
aggataacat tttatacag aaggcagtc agctcaactc agagccatgg aggcaagtac
6840
cttaattagt tttatatagt cacaacggaa atatattttc tagtgaattc ttattggaag
6900
ccaggtctct cctctcatta gatcaaaagg gacttatgta catacaacia ttgaaagtgt
6960
ttgctcatga aatcagttat aaatatgggtg aattttttct ggaccatagg aatattattt
7020
caaagaaata ttacaactta accattaaat tagtacttga agttgagcct ttgtgggtggg
7080

acttttttaaa aaaatgcctt ttttaaagcat taatggctaa ttgaagtatt ttatgactcc
7140
tcattcctgg cccagaggggt tgtctttgaa accctgtttc taacccttgt gttgtgtggt
7200
tctgtctgag gacagtgggt gtgtactggc ctcccgggag ccactgtgac caggcctttg
7260
agctcttgct atctgtggag agaatcatgc aaatttttaa agttcttcca agagacttcc
7320
atgtcctgggt tattaacaaa aaaggaaaaa tgtaataatt gatatgattt tgtaaaagta
7380
tttttcttga aataatctaa agtttaaaac attatattaa aaaaaagtt gtgtgggtggg
7440
aatgtgaaag cagagaaata acttgtaaatt ggataatttt gttctctgta ccaccagttg
7500
aaggggggggt tgactttcgc aatgtatagg ataaaaaatc tgatatatca aaccatttgt
7560
atctaattgt tacagtgtaa aattgacttt aaaaatattg cagtgtctatt ttttcttaat
7620
cagaaaggaa aattctcaag gccttttgaa gagcataaga agatgaagat tgtaaaactg
7680
tataaaatta tcttggtgag aagacaaatt gtaaagtaga tatttgtaat cttttaccac
7740
tttgggggtg cttttttccc ggaattcatc agaactttga attttttttt taaatgggct
7800
gttttttaatg caggggcttt tcttccttag aaaccaatt ctaagcagaa aaagaaaaaa
7860
aacacaaaaa ataaaaaacc cctacaaaaa aacttttaaa aaaatggcag caaagggtag
7920
ttttcatctg gtgtctttta ttttaagtttt ttaagttaag aaaagctgggt gacatattta
7980
tacgtttttg tgcaaaaata aatgaatggc aatagatttt aaaaaatctt attatgtact
8040
tctgtgtgaa aaagtctgta taatatttcc cttaaatatg cattatttta cttgtgagtt
8100
ttttactgaa ttaatctgaa atgtacaagc cctggatttg ctacagagtg agaagttatt
8160
ttattttttt ttatttttaa ttttggaat tctgcagaaa tcagaactct taccatgggt
8220
tgaacaaaaa aaggggaaat ggggagggga aaagggtggg attgtccagc atgcttgat
8280
gtatatattca gaacctttt taaatgtaaa agctgtacat ttctgggaag ttctgaattt
8340
cttttggttc cttttttcct tcaagcattt tgcagtgagc ttcttttata tatagcaaac
8400
aatttgaaaag aatacaaaaa tatgtgaagt tcattttaaa aaataactac agtatagcgc
8460
tggtacagta cactaaaaga ctttgataaa aagaaacaat aataaaaggc ctccatttta
8520
aatgtcattc atatatacct tgtggatgag agctatatac ttttacacac ttttttagag
8580
gaataaatta ttgaattact gaaaaaagaa aaaaaaaaaa aaaaa
8625

<210> 2778

<211> 1146

<212> PRT

<213> Homo sapiens

<400> 2778

Thr Ala Ser Gly Gln Gly Ser Val Lys Tyr Asp Ser Thr Asp Gln Gly
 1 5 10 15
 Ser Pro Ala Ser Thr Pro Ser Thr Thr Arg Pro Leu Asn Ser Val Glu
 20 25 30
 Pro Ala Thr Met Gln Pro Ile Pro Glu Ala His Ser Leu Tyr Val Thr
 35 40 45
 Leu Ile Leu Ser Asp Ser Val Met Asn Ile Phe Lys Asp Arg Asn Phe
 50 55 60
 Asp Ser Cys Cys Ile Cys Ala Cys Asn Met Asn Ile Lys Gly Ala Asp
 65 70 75 80
 Val Gly Leu Tyr Ile Pro Asp Ser Ser Asn Glu Asp Gln Tyr Arg Cys
 85 90 95
 Thr Cys Gly Phe Ser Ala Ile Met Asn Arg Lys Leu Gly Tyr Asn Ser
 100 105 110
 Gly Leu Phe Leu Glu Asp Glu Leu Asp Ile Phe Gly Lys Asn Ser Asp
 115 120 125
 Ile Gly Gln Ala Ala Glu Arg Arg Leu Met Met Cys Gln Ser Thr Phe
 130 135 140
 Leu Pro Gln Val Glu Gly Thr Lys Lys Pro Gln Glu Pro Pro Ile Ser
 145 150 155 160
 Leu Leu Leu Leu Leu Gln Asn Gln His Thr Gln Pro Phe Ala Ser Leu
 165 170 175
 Asn Phe Leu Asp Tyr Ile Ser Ser Asn Asn Arg Gln Thr Leu Pro Cys
 180 185 190
 Val Ser Trp Ser Tyr Asp Arg Val Gln Ala Asp Asn Asn Asp Tyr Trp
 195 200 205
 Thr Glu Cys Phe Asn Ala Leu Glu Gln Gly Arg Gln Tyr Val Asp Asn
 210 215 220
 Pro Thr Gly Gly Lys Val Asp Glu Ala Leu Val Arg Ser Ala Thr Val
 225 230 235 240
 His Ser Trp Pro His Ser Asn Val Leu Asp Ile Ser Met Leu Ser Ser
 245 250 255
 Gln Asp Val Val Arg Met Leu Leu Ser Leu Gln Pro Phe Leu Gln Asp
 260 265 270
 Ala Ile Gln Lys Lys Arg Thr Gly Arg Thr Trp Glu Asn Ile Gln His
 275 280 285
 Val Gln Gly Pro Leu Thr Trp Gln Gln Phe His Lys Met Ala Gly Arg
 290 295 300
 Gly Thr Tyr Gly Ser Glu Glu Ser Pro Glu Pro Leu Pro Ile Pro Thr
 305 310 315 320
 Leu Leu Val Gly Tyr Asp Lys Asp Phe Leu Thr Ile Ser Pro Phe Ser
 325 330 335
 Leu Pro Phe Trp Glu Arg Leu Leu Leu Asp Pro Tyr Gly Gly His Arg
 340 345 350
 Asp Val Ala Tyr Ile Val Val Cys Pro Glu Asn Glu Ala Leu Leu Glu
 355 360 365
 Gly Ala Lys Thr Phe Phe Arg Asp Leu Ser Ala Val Tyr Glu Met Cys
 370 375 380
 Arg Leu Gly Gln His Lys Pro Ile Cys Lys Val Leu Arg Asp Gly Ile

385					390					395				400
Met	Arg	Val	Gly	Lys	Thr	Val	Ala	Gln	Lys	Leu	Thr	Asp	Glu	Leu
				405					410					415
Ser	Glu	Trp	Phe	Asn	Gln	Pro	Trp	Ser	Gly	Glu	Glu	Asn	Asp	Asn
			420					425					430	
Ser	Arg	Leu	Lys	Leu	Tyr	Ala	Gln	Val	Cys	Arg	His	His	Leu	Ala
		435				440						445		Pro
Tyr	Leu	Ala	Thr	Leu	Gln	Leu	Asp	Ser	Ser	Leu	Leu	Ile	Pro	Pro
	450				455						460			Lys
Tyr	Gln	Thr	Pro	Pro	Ala	Ala	Ala	Gln	Gly	Gln	Ala	Thr	Pro	Gly
465					470					475				480
Ala	Gly	Pro	Leu	Ala	Pro	Asn	Gly	Ser	Ala	Ala	Pro	Pro	Ala	Gly
			485					490						495
Ala	Phe	Asn	Pro	Thr	Ser	Asn	Ser	Ser	Ser	Thr	Asn	Pro	Ala	Ala
			500					505					510	Ser
Ser	Ser	Ala	Ser	Gly	Ser	Ser	Val	Pro	Pro	Val	Ser	Ser	Ser	Ala
	515						520					525		Ser
Ala	Pro	Gly	Ile	Ser	Gln	Ile	Ser	Thr	Thr	Ser	Ser	Ser	Gly	Phe
	530				535						540			Ser
Gly	Ser	Val	Gly	Gly	Gln	Asn	Pro	Ser	Thr	Gly	Gly	Ile	Ser	Ala
545					550					555				560
Arg	Thr	Gln	Arg	Asn	Ile	Gly	Cys	Gly	Gly	Asp	Thr	Asp	Pro	Gly
			565					570						575
Ser	Ser	Ser	Gln	Pro	Ser	Gln	Asp	Gly	Gln	Glu	Ser	Val	Thr	Glu
		580					585						590	Arg
Glu	Arg	Ile	Gly	Ile	Pro	Thr	Glu	Pro	Asp	Ser	Ala	Asp	Ser	His
	595					600						605		Ala
His	Pro	Pro	Ala	Val	Val	Ile	Tyr	Met	Val	Asp	Pro	Phe	Thr	Tyr
	610				615						620			Ala
Ala	Glu	Glu	Asp	Ser	Thr	Ser	Gly	Asn	Phe	Trp	Leu	Leu	Ser	Leu
625					630					635				640
Arg	Cys	Tyr	Thr	Glu	Met	Leu	Asp	Asn	Leu	Pro	Glu	His	Met	Arg
			645					650						655
Ser	Phe	Ile	Leu	Gln	Ile	Val	Pro	Cys	Gln	Tyr	Met	Leu	Gln	Thr
		660					665						670	Met
Lys	Asp	Glu	Gln	Val	Phe	Tyr	Ile	Gln	Tyr	Leu	Lys	Ser	Met	Ala
	675						680					685		Phe
Ser	Val	Tyr	Cys	Gln	Cys	Arg	Arg	Pro	Leu	Pro	Thr	Gln	Ile	His
	690				695						700			Ile
Lys	Ser	Leu	Thr	Gly	Phe	Gly	Pro	Ala	Ala	Ser	Ile	Glu	Met	Thr
705				710						715				720
Lys	Asn	Pro	Glu	Arg	Pro	Ser	Pro	Ile	Gln	Leu	Tyr	Ser	Pro	Pro
			725						730					735
Ile	Leu	Ala	Pro	Ile	Lys	Asp	Lys	Gln	Thr	Glu	Leu	Gly	Glu	Thr
		740					745						750	Phe
Gly	Glu	Ala	Ser	Gln	Lys	Tyr	Asn	Val	Leu	Phe	Val	Gly	Tyr	Cys
	755						760					765		Leu
Ser	His	Asp	Gln	Arg	Trp	Leu	Leu	Ala	Ser	Cys	Thr	Asp	Leu	His
	770				775						780			Gly
Glu	Leu	Leu	Glu	Thr	Cys	Val	Val	Asn	Ile	Ala	Leu	Pro	Asn	Arg
785				790					795					800
Arg	Arg	Ser	Lys	Val	Ser	Ala	Arg	Lys	Ile	Gly	Leu	Gln	Lys	Leu
			805					810						815
Glu	Trp	Cys	Ile	Gly	Ile	Val	Gln	Met	Thr	Ser	Leu	Pro	Trp	Arg

820 825 830
 Val Ile Gly Arg Leu Gly Arg Leu Gly His Gly Glu Leu Lys Asp Trp
 835 840 845
 Ser Ile Leu Leu Gly Glu Cys Ser Leu Gln Thr Ile Ser Lys Lys Leu
 850 855 860
 Lys Asp Val Cys Arg Met Cys Gly Ile Ser Ala Ala Asp Ser Pro Ser
 865 870 875 880
 Ile Leu Ser Ala Cys Leu Val Ala Met Glu Pro Gln Gly Ser Phe Val
 885 890 895
 Val Met Pro Asp Ala Val Thr Met Gly Ser Val Phe Gly Arg Ser Thr
 900 905 910
 Ala Leu Asn Met Gln Ser Ser Gln Leu Asn Thr Pro Gln Asp Ala Ser
 915 920 925
 Cys Thr His Ile Leu Val Phe Pro Thr Ser Ser Thr Ile Gln Val Ala
 930 935 940
 Pro Ala Asn Tyr Pro Asn Glu Asp Gly Phe Ser Pro Asn Asn Asp Asp
 945 950 955 960
 Met Phe Val Asp Leu Pro Phe Pro Asp Asp Met Asp Asn Asp Ile Gly
 965 970 975
 Ile Leu Met Thr Gly Asn Leu His Ser Ser Pro Asn Ser Ser Pro Val
 980 985 990
 Pro Ser Pro Gly Ser Pro Ser Gly Ile Gly Val Gly Ser His Phe Gln
 995 1000 1005
 His Ser Arg Ser Gln Gly Glu Arg Leu Leu Ser Arg Glu Ala Pro Glu
 1010 1015 1020
 Glu Leu Lys Gln Gln Pro Leu Ala Leu Gly Tyr Phe Val Ser Thr Ala
 1025 1030 1035 1040
 Lys Ala Glu Asn Leu Pro Gln Trp Phe Trp Ser Ser Cys Pro Gln Ala
 1045 1050 1055
 Gln Asn Gln Cys Pro Leu Phe Leu Lys Ala Ser Leu His His His Ile
 1060 1065 1070
 Ser Val Ala Gln Thr Asp Glu Leu Leu Pro Ala Arg Asn Ser Gln Arg
 1075 1080 1085
 Val Pro His Pro Leu Asp Ser Lys Thr Thr Ser Asp Val Leu Arg Phe
 1090 1095 1100
 Val Leu Glu Gln Tyr Asn Ala Leu Ser Trp Leu Thr Cys Asn Pro Ala
 1105 1110 1115 1120
 Thr Gln Asp Arg Thr Ser Cys Leu Pro Val His Phe Val Val Leu Thr
 1125 1130 1135
 Gln Leu Tyr Asn Ala Ile Met Asn Ile Leu
 1140 1145

<210> 2779

<211> 2461

<212> DNA

<213> Homo sapiens

<400> 2779

gaggcggatc acttgaggtc aggagttcga gagcagcctg accaacatag tgaaaccctg
60

tctctactaa aaatacaaaa aacattagtt gggcatgggtg gcaggcacct gtaatctcag
120

ctacttgggga ggctgaggca ggagaatcgc ttgatacctaa gaggcagagg ctgcagtgat
180

ctgagatcac gccactgcac tccagccttt ggagactctg tctccaaaaa aaaaaaaaaa
240
aaaaaaaaaa agtatatata tataaacata tatcaaagaa gttaagcaaa gtgaggaaaa
300
atgcactccg agcaggaggg ccagcatgtg caaaggccct gcggtggaaa ggaatttggc
360
ctgtttgagg agctgagtga aggctcattt ggctgggtca cagggataag aaggatgaga
420
ttcaagggct tggcaggggt cgacagcagc cttgaggtgg tgtctttgct tcctccccgc
480
agcttctcgc tgaattccga gggggctgag aggatggcca ccaccgggac cccaacggcc
540
gaccgaggcg acgcagccgc cacagatgac ccggccgccc gcttcaggt gcagaagcac
600
tcgtgggacg ggctccggag catcatccac ggcagccgca agtactcggg cctcattgtc
660
aacaaggcgc cccacgactt ccagtttgtg cagaagacgg atgagtctgg gccccactcc
720
caccgcctct actacctggg aatgccatat ggcagccgag agaactccct cctctactct
780
gagattccca agaaggtccg gaaagaggct ctgctgctcc tgtcctggaa gcagatgctg
840
gatcatttcc aggccacgcc ccaccatggg gtctactctc gggaggagga gctgctgagg
900
gagcggaac gcctgggggt cttcggcatc acctcctacg acttccacag cgagagtggc
960
ctcttctct tccaggccag caacagcctc ttccactgcc gcgacggcgg caagaacggc
1020
ttcatggtga gccctggccc tggctgtgtg tccccatga aaccgctgga aatcaagacc
1080
cagtgtcag ggccccggat ggaccccaaa atctgccctg ccgaccctgc cttcttctcc
1140
ttcatcaata acagcgacct gtgggtggcc aacatcgaga caggcgagga gcggcggtg
1200
accttctgcc accaagggtt atccaatgtc ctggatgacc ccaagtctgc ggggtgtggc
1260
accttcgtca tacaggaaga gttcgaccgc ttactgggt actggtggtg cccacagcc
1320
tcctgggaag gttcagaggg cctcaagacg ctgcgaatcc tgtatgagga agtcgatgag
1380
tccgaggtgg aggtcattca cgtccctct cctgcgctag aagaaaggaa gacggactcg
1440
tatcggtacc ccaggacagg cagcaagaat cccaagattg ccttgaaact ggctgagttc
1500
cagactgaca gccagggcaa gatcgtctcg acccaggaga aggagctggt gcagcccttc
1560
agctcgtgt tcccgaaggt ggagtacatc gccagggccg ggtggaccgc ggatggcaaa
1620
tacgcctggg ccattgttct ggaccggccc cagcagtggc tccagctcgt cctcctcccc
1680
ccggccctgt tcatccccgag cacagagaat gaggagcagc ggctagcctc tgccagagct
1740
gtccccagga atgtccagcc gtatgtggtg tacgaggagg tcaccaacgt ctggatcaat
1800

gttcatgaca ttttctatcc cttcccccaa tcagagggag aggacgagct ctgctttctc
 1860
 cgcgccaatg aatgcaagac cggctttctgc catttgtaca aagtcaccgc cgttttaaaa
 1920
 tcccagggct acgattggag tgagcccttc agccccgggg aagatgaatt taagtcccc
 1980
 attaaggaag agattgctct gaccagcggg gaatgggagg ttttggcgag gcacggctcc
 2040
 aagatctggg tcaatgagga gaccaagctg gtgtacttcc agggcaccaa ggacacgccg
 2100
 ctggagcacc acctctacgt ggtcagctat gaggcggccg gcgagatcgt acgcctcacc
 2160
 acgccccggt tctcccatag ctgctccatg agccagaact tcgacatggt cgtcagccac
 2220
 tacagcagcg tgagcacgcc gccctgcgtg cacgtctaca agctgagcgg ccccgacgac
 2280
 gacccccctgc acaagcagcc ccgcttctgg gctagcatga tggaggcagc cagctgcccc
 2340
 ccggattatg ttccctccaga gatcttccat ttccacacgc gctcggatgt gcggctctac
 2400
 ggcattgatct acaagccccca cgccttgag cacatcacca aaaaatctac cgtcttcgag
 2460
 a
 2461

<210> 2780
 <211> 720
 <212> PRT
 <213> Homo sapiens

<400> 2780
 Met His Ser Glu Gln Glu Gly Gln His Val Gln Arg Pro Cys Gly Gly
 1 5 10 15
 Lys Glu Phe Gly Leu Phe Glu Glu Leu Ser Glu Gly Ser Phe Gly Trp
 20 25 30
 Val Thr Gly Ile Arg Arg Met Arg Phe Lys Gly Leu Ala Gly Val Asp
 35 40 45
 Ser Ser Leu Glu Val Val Ser Leu Leu Pro Pro Arg Ser Phe Ser Leu
 50 55 60
 Asn Ser Glu Gly Ala Glu Arg Met Ala Thr Thr Gly Thr Pro Thr Ala
 65 70 75 80
 Asp Arg Gly Asp Ala Ala Ala Thr Asp Asp Pro Ala Ala Arg Phe Gln
 85 90 95
 Val Gln Lys His Ser Trp Asp Gly Leu Arg Ser Ile Ile His Gly Ser
 100 105 110
 Arg Lys Tyr Ser Gly Leu Ile Val Asn Lys Ala Pro His Asp Phe Gln
 115 120 125
 Phe Val Gln Lys Thr Asp Glu Ser Gly Pro His Ser His Arg Leu Tyr
 130 135 140
 Tyr Leu Gly Met Pro Tyr Gly Ser Arg Glu Asn Ser Leu Leu Tyr Ser
 145 150 155 160
 Glu Ile Pro Lys Lys Val Arg Lys Glu Ala Leu Leu Leu Leu Ser Trp
 165 170 175
 Lys Gln Met Leu Asp His Phe Gln Ala Thr Pro His His Gly Val Tyr

2025

610
 Ser His Ser Cys Ser Met Ser Gln Asn Phe Asp Met Phe Val Ser His
 625 630 635 640
 Tyr Ser Ser Val Ser Thr Pro Pro Cys Val His Val Tyr Lys Leu Ser
 645 650 655
 Gly Pro Asp Asp Asp Pro Leu His Lys Gln Pro Arg Phe Trp Ala Ser
 660 665 670
 Met Met Glu Ala Ala Ser Cys Pro Pro Asp Tyr Val Pro Pro Glu Ile
 675 680 685
 Phe His Phe His Thr Arg Ser Asp Val Arg Leu Tyr Gly Met Ile Tyr
 690 695 700
 Lys Pro His Ala Leu Gln His Ile Thr Lys Lys Ser Thr Val Phe Glu
 705 710 715 720

<210> 2781

<211> 1268

<212> DNA

<213> Homo sapiens

<400> 2781

gtcgacggac ttcaggaagt gcagcgccag gcacaagagg ggaagaatat aggcaccacc
 60
 aagaagggaa tcggaccaac ctactcttcc aaagctgccc ggacaggcct ccgcatctgc
 120
 gacctcctgt cagatcttga tgagttttct tccagattca agaacctggc ccaccagcac
 180
 cagtcgatgt tccccaccct ggaaatagac attgaaggcc aactcaaaag gctcaagggc
 240
 tttgctgagc ggatcagacc catgggtccga gatgggtgtt actttatgta tgaggcactc
 300
 cacggccccc ccaagaagat cctgggtggag ggtgccaaag ccgccctcct cgacattgac
 360
 ttcgggacct acccctttgt gacttcatcc aactgcaccg tgggcgggtgt gtgcacgggc
 420
 ctgggcatcc ccccgagaa cataggtgac gtgtatggcg tggtgaaagc ctataaccaca
 480
 cgtgtgggca tcggggcctt cccaccgag cagatcaacg agattggagg cctgctcgac
 540
 acccgcgcc acgagtgggg agtgaccaca ggcaggaaga ggcgctgcgg ctggctcgac
 600
 ctgatgattc taagatatgc tcacatggtc aacggattca ctgcgctggc cctgacgaag
 660
 ctggacatcc tggacgtact ggggtgaggt aaagtcgggtg tctcatacaa gctgaacggg
 720
 aaaaggattc cctatttccc agctaaccag gagatgcttc agaaggtcga agttgagtat
 780
 gaaacgctgc ctgggtggaa agcagacacc acaggcgcca ggaggtggga ggacctgccc
 840
 ccacaggccc agaactacat ccgctttgtg gagaatcacg tgggagtcgc agtcaaattg
 900
 gttgggtgtg gcaagtcaag agagtcgatg atccagctgt tttagtcgca gactgagctg
 960
 atcccaacag gccctggcag cgtctggact tgtgtaaaca gcagcagtca cgttcctcgg
 1020

ccgccacaac caacaccaaa gcaggaaaac cattttctgt acttttatat ttctgttcaa
 1080
 cctgttggtt tctacaatga ttttaaacaat tggaaagcca gccttggtga tattttttaa
 1140
 aattatattc aaaatgagcc aaagtgtctc gagaccttct atgacacatt agtgtcacat
 1200
 ggttgcgtgt ccagccgaag cagtgttaata aacatctcca atggccactg aaaaaaaaaa
 1260
 aaaaaaaaa
 1268

<210> 2782

<211> 314

<212> PRT

<213> Homo sapiens

<400> 2782

Val	Asp	Gly	Leu	Gln	Glu	Val	Gln	Arg	Gln	Ala	Gln	Glu	Gly	Lys	Asn
1				5					10					15	
Ile	Gly	Thr	Thr	Lys	Lys	Gly	Ile	Gly	Pro	Thr	Tyr	Ser	Ser	Lys	Ala
			20					25					30		
Ala	Arg	Thr	Gly	Leu	Arg	Ile	Cys	Asp	Leu	Leu	Ser	Asp	Phe	Asp	Glu
		35					40					45			
Phe	Ser	Ser	Arg	Phe	Lys	Asn	Leu	Ala	His	Gln	His	Gln	Ser	Met	Phe
	50					55					60				
Pro	Thr	Leu	Glu	Ile	Asp	Ile	Glu	Gly	Gln	Leu	Lys	Arg	Leu	Lys	Gly
65					70					75				80	
Phe	Ala	Glu	Arg	Ile	Arg	Pro	Met	Val	Arg	Asp	Gly	Val	Tyr	Phe	Met
				85					90					95	
Tyr	Glu	Ala	Leu	His	Gly	Pro	Pro	Lys	Lys	Ile	Leu	Val	Glu	Gly	Ala
			100					105					110		
Asn	Ala	Ala	Leu	Leu	Asp	Ile	Asp	Phe	Gly	Thr	Tyr	Pro	Phe	Val	Thr
		115					120					125			
Ser	Ser	Asn	Cys	Thr	Val	Gly	Gly	Val	Cys	Thr	Gly	Leu	Gly	Ile	Pro
	130					135					140				
Pro	Gln	Asn	Ile	Gly	Asp	Val	Tyr	Gly	Val	Val	Lys	Ala	Tyr	Thr	Thr
145					150					155				160	
Arg	Val	Gly	Ile	Gly	Ala	Phe	Pro	Thr	Glu	Gln	Ile	Asn	Glu	Ile	Gly
				165					170					175	
Gly	Leu	Leu	Gln	Thr	Arg	Gly	His	Glu	Trp	Gly	Val	Thr	Thr	Gly	Arg
			180					185					190		
Lys	Arg	Arg	Cys	Gly	Trp	Leu	Asp	Leu	Met	Ile	Leu	Arg	Tyr	Ala	His
		195				200					205				
Met	Val	Asn	Gly	Phe	Thr	Ala	Leu	Ala	Leu	Thr	Lys	Leu	Asp	Ile	Leu
	210					215					220				
Asp	Val	Leu	Gly	Glu	Val	Lys	Val	Gly	Val	Ser	Tyr	Lys	Leu	Asn	Gly
225					230					235				240	
Lys	Arg	Ile	Pro	Tyr	Phe	Pro	Ala	Asn	Gln	Glu	Met	Leu	Gln	Lys	Val
				245					250					255	
Glu	Val	Glu	Tyr	Glu	Thr	Leu	Pro	Gly	Trp	Lys	Ala	Asp	Thr	Thr	Gly
		260						265					270		
Ala	Arg	Arg	Trp	Glu	Asp	Leu	Pro	Pro	Gln	Ala	Gln	Asn	Tyr	Ile	Arg
		275					280					285			
Phe	Val	Glu	Asn	His	Val	Gly	Val	Ala	Val	Lys	Trp	Val	Gly	Val	Gly

290 295 300
 Lys Ser Arg Glu Ser Met Ile Gln Leu Phe
 305 310

<210> 2783
 <211> 2376
 <212> DNA
 <213> Homo sapiens

<400> 2783
 gccgaacggc aaattgaaga agaaaaccga gagagagaat gggaacggga agtgctgggc
 60
 ataaagcgag acaagagtga cagccctgcc attcagctac gtctcaaaga acctatggat
 120
 gttgatgtag aagattatta cccagctttc ctggacatgg tgcggagcct gctggatggc
 180
 aacatagact catcacagta tgaagattca ctgagagaga tgttcaccat tcatgcctac
 240
 attgccttta ccatggacaa actgatccag agcattgtca gacagctgca gcatatcgtg
 300
 agtgatgaga tctgtgtgca ggtgactgac ctttacctgg cagaaaataa taatggggcc
 360
 accggaggcc agctgaacac acagaactca aggagcctcc tggagtcaac gtatcagcgg
 420
 aaagctgagc agctaattgtc agatgagaat tgctttaagc ttatgtttat tcagagccaa
 480
 ggccaggtcc agctgactat tgagcttctg gacacagaag aggagaattc ggatgaccct
 540
 gtggaagcag agcgtctggc agactacgtg gagcgataca tgaattcaga tactacctcg
 600
 cctgagcttc gtgaacatct agcacagaaa ccagtatttc tcccaggaa tctacggcgg
 660
 atccggaagt gtcaacgtgg tcgagagcag caggaaaagg aagggaagga aggaaacagc
 720
 aagaagacca tggagaatgt ggatagtctg gataagctgg agtgtagatt caagctgaat
 780
 tectacaaga tgggtgatgt gatcaaatca gaggactata tgtatcggag gaccgcccctg
 840
 ctccgggctc atcagtccca tgagcgtgta agcaagcgtc tacatcagag attccaggcc
 900
 tgggtagata aatggaccaa ggagcatgtg ccccgtagaa tggcagcaga gaccagcaag
 960
 tggctcatgg gtgaggggct ggagggcctg gtgcctgtga ccaccacctg tgatacagag
 1020
 accctgcatt ttgtgagcat taacaagtat cgtgtcaaat acggcacagt attcaaagcc
 1080
 ccttaactgc aaagccagag cagataactt ggggtgtgtg tggggatgtg tgtgtgggcc
 1140
 tatgcactca cacactgaag aaacaaggaa gatgcctttc aagcctcact gggcctctct
 1200
 gggacatggc cacctgacct gtgtgtggct ggtgcagcct ggcaccaagt gggctacctg
 1260
 ttaggaacat gaatacctta caaagctgaa gctggaactt ttcccaaagg gttttgggta
 1320

tagcctgccc tggaggggaa ggaagtccat gcaagcaaag acatgcagtt tgcttgca
 1380
 caccagcaga gctaagactg gagtctcctg tggcctaact ttcaatgagg gaaccggatg
 1440
 ctgttcacac tttgactgga tggagatgca ttacaaaac agactggaga aggacttaat
 1500
 actcagatgg attggaacta tcatggtcac tgctcctctc ccctccccac aaaaggaaaa
 1560
 aaaagctgga tttgattttt tttttctggt cactcgagca catctaagat caccattag
 1620
 gttttatctg ggacctgcag tttggctttg ggattgatca tcttgtggat tttattcctg
 1680
 acgattccct tgctgcctac ccttttctct cctctgggtc tcaacctcaa cgagttcaaa
 1740
 tcagttgtcc tttttagctc ccgtggaact gttttgtatc tgctcttta ctagtctacc
 1800
 ttagtgccat ccaccagctt tactctctga cacacacacg cacacacaca cacacaattt
 1860
 taacttgttt tttgtacat aatgtacata ctgtcaattt tttattaaaa gaaatatgct
 1920
 ttgatgtgct agcataactg ctctagcttc ttgtgtacca tagtactgtg gcttcagatt
 1980
 tagtacctat gaacagatgt acaagacatt tattacactt tttaccaaag ggagttacca
 2040
 ttgtagtact tttgtgtaaa acttgtcttc ccctttgccc ccaacttttt tttttttttt
 2100
 ttgtaataaa ataaagcttg gttcttactt aaggaaaaaa ctctcaaccc acgtcccttg
 2160
 tctcaccag aaaatactgt gaagcaggga ttttgacttc agttccttat ccagggtaga
 2220
 aacaggattt tgcttaaaat acttgttact tgteccaaat caaaatattc caaaatctta
 2280
 gaatacttaa gtcttttagt acgtgttttt ttccttggtt caaataatct gaaaatattt
 2340
 tatatttggg taagttgtca agctatgtag tttgta
 2376

<210> 2784

<211> 361

<212> PRT

<213> Homo sapiens

<400> 2784

Ala	Glu	Arg	Gln	Ile	Glu	Glu	Glu	Asn	Arg	Glu	Arg	Glu	Trp	Glu	Arg
1				5				10						15	
Glu	Val	Leu	Gly	Ile	Lys	Arg	Asp	Lys	Ser	Asp	Ser	Pro	Ala	Ile	Gln
			20					25					30		
Leu	Arg	Leu	Lys	Glu	Pro	Met	Asp	Val	Asp	Val	Glu	Asp	Tyr	Tyr	Pro
			35				40					45			
Ala	Phe	Leu	Asp	Met	Val	Arg	Ser	Leu	Leu	Asp	Gly	Asn	Ile	Asp	Ser
			50			55					60				
Ser	Gln	Tyr	Glu	Asp	Ser	Leu	Arg	Glu	Met	Phe	Thr	Ile	His	Ala	Tyr
65					70				75					80	
Ile	Ala	Phe	Thr	Met	Asp	Lys	Leu	Ile	Gln	Ser	Ile	Val	Arg	Gln	Leu

```
<400> 2785
gccgcggttc ggacccgccg ggcacatggc cagctccgga gaggacatat ccaatgatga
60
tgatgacatg caccctgcag cagccgggat ggcagacggg gtccacctcc tagggttctc
120
tgatgagatc ctcttcaca tcctgagtca cgtccccagc acagatctga ttctgaacgt
180
ccggcggtacc tgtcggaagc ttgcagccct gtgccttgac aagagcctca tccacaccgt
240
gttgctgcaa aaggactatc aggcgagcga ggacaaagtg aggcagctgg tgaaggagat
300
cggccgggag atccagcagc tgagcatggc tggctgctac tggctgcctg gctccaccgt
360
```

ggaacacgtg gcccgctgcc cgcagcctgg tgaaggtgaa cctctcgggc tgccacctca
 420
 cttccctgcg cctctacaag atgctctcgg ccctgcagca cctgcgctcg ctggccatcg
 480
 acgtgagccc cg
 492

<210> 2786
 <211> 155
 <212> PRT
 <213> Homo sapiens

<400> 2786
 Met Ala Ser Ser Gly Glu Asp Ile Ser Asn Asp Asp Asp Asp Met His
 1 5 10 15
 Pro Ala Ala Ala Gly Met Ala Asp Gly Val His Leu Leu Gly Phe Ser
 20 25 30
 Asp Glu Ile Leu Leu His Ile Leu Ser His Val Pro Ser Thr Asp Leu
 35 40 45
 Ile Leu Asn Val Arg Arg Thr Cys Arg Lys Leu Ala Ala Leu Cys Leu
 50 55 60
 Asp Lys Ser Leu Ile His Thr Val Leu Leu Gln Lys Asp Tyr Gln Ala
 65 70 75 80
 Ser Glu Asp Lys Val Arg Gln Leu Val Lys Glu Ile Gly Arg Glu Ile
 85 90 95
 Gln Gln Leu Ser Met Ala Gly Cys Tyr Trp Leu Pro Gly Ser Thr Val
 100 105 110
 Glu His Val Ala Arg Cys Pro Gln Pro Gly Glu Gly Glu Pro Leu Gly
 115 120 125
 Leu Pro Pro His Phe Pro Ala Pro Leu Gln Asp Ala Leu Gly Pro Ala
 130 135 140
 Ala Pro Ala Leu Ala Gly His Arg Arg Glu Pro
 145 150 155

<210> 2787
 <211> 299
 <212> DNA
 <213> Homo sapiens

<400> 2787
 ngctctttaga caatgactcg ggacagtgga atgaaacaga agcatgctgc atcaacctca
 60
 atgtgggggag aagagccgta ctctgacata tcagttgcta aaacacgtgc agggcatgccc
 120
 acaatgcaca gacatggcag tatccttctg gtgggagggga gtcaccattt gctctgcctt
 180
 gccctctgct ggggtgctctt acaggtgcta ctgcatccag cgcttgaaac aattctgtgg
 240
 ggtattgatt ctgaagagat cactgatggc cgtgatttct tgcctcagct taccagat
 299

<210> 2788
 <211> 95
 <212> PRT

<213> Homo sapiens

<400> 2788

```

Met Thr Arg Asp Ser Gly Met Lys Gln Lys His Ala Ala Ser Thr Ser
 1           5           10           15
Met Trp Gly Glu Glu Pro Tyr Ser Asp Ile Ser Val Ala Lys Thr Arg
           20           25           30
Ala Gly His Ala Thr Met His Arg His Gly Ser Ile Leu Leu Val Gly
 35           40           45
Gly Ser His His Leu Leu Cys Pro Ala Leu Cys Trp Val Leu Leu Gln
 50           55           60
Val Leu Leu His Pro Ala Leu Glu Thr Ile Leu Trp Gly Ile Asp Ser
 65           70           75           80
Glu Glu Ile Thr Asp Gly Arg Asp Phe Leu Pro Gln Leu Thr Gln
           85           90           95

```

<210> 2789

<211> 492

<212> DNA

<213> Homo sapiens

<400> 2789

```

nggaccccgag ctgctccttt ttgaaggaaa tctgctcgct cagggagtcg atgcggccga
60
gctgctggaa ggagtgcacc aggaggctgc cgggggtccgg gagcccatgc tccagtgcct
120
gcgaggccag gctgtgcagt gggggccagca ccagctgcag cttctcctcc agcagggtcca
180
ccctggactg cagcctctgc acttcttctt tcattgcact gtccactcct gcgggcagag
240
ccaggcgctg ggtaacggcc ggccggctcc ccacccacac cccagggtct cctcctgtgc
300
cccagggaga ggcagagcca gaagactcag gcccaggcct ctgccacccc cgctgcctgc
360
ctggcgctgg ccagaggtct caggctatgc cgcctaagta cgtcggggcg ggtggctctg
420
cgagagggtc caggggtccc gccacgctga gggagggtcaa ggctgaggtc tcagcggccc
480
tcgttccgaa tt
492

```

<210> 2790

<211> 141

<212> PRT

<213> Homo sapiens

<400> 2790

```

Arg Lys Ser Ala Arg Ser Gly Ser Arg Cys Gly Arg Ala Ala Gly Arg
 1           5           10           15
Ser Ala Pro Gly Gly Cys Arg Gly Pro Gly Ala His Ala Pro Val Pro
           20           25           30
Ala Arg Pro Gly Cys Ala Val Gly Pro Ala Pro Ala Ala Ser Pro
           35           40           45
Pro Ala Gly Pro Pro Trp Thr Ala Ala Ser Ala Leu Leu Pro Ser Leu

```

50		55		60
His Cys Pro Leu Leu Arg Ala Glu Pro Gly Ala Gly Ser Arg Pro Ala				
65		70		75
Gly Ser Pro Pro Thr Pro Pro Gly Leu Pro Pro Val Pro Arg Glu Arg				80
	85		90	95
Gln Ser Gln Lys Thr Gln Ala Gln Ala Ser Ala Thr Pro Ala Ala Cys				
	100		105	110
Leu Ala Leu Ala Arg Gly Leu Arg Leu Cys Arg Leu Ser Thr Ser Gly				
	115		120	125
Arg Val Ala Leu Arg Arg Gly Ser Gly Ser Arg Pro Arg				
	130		135	140

<210> 2791

<211> 1271

<212> DNA

<213> Homo sapiens

<400> 2791

```

nntgtacagg ggatgcagaa tcaatgaaag agataaacia acatcagagt actgtcagac
60
atagaggact ggataataca tttgtgtctt tctacatagt ggtatagaaa tatcaggtcc
120
ccaaattccc atttttcttc caatcacatt taaaatttca atatgttgca ggcagtatgt
180
gtaagattat atccaaatat ttactcctgg ttgctcctct tgggcaagct gtgaatatga
240
tcaaaatatt taaagaagga agaaggtaaa gatctaaaat atgacatgaa aataccaga
300
gaagtgtgcc taaattagca ttagggtttg agggatccta aggatgacaa aaagggactc
360
ttctattgaa ttcgtggttg atgtcagcg atagtaacia tcctgcctcc cctaacatct
420
tcctccccct ccagcagctt cacagaacat ggttgatgag gtaacttagg ggatgcacag
480
ggtgtggcca gaagaccctt ttccctatag accactatga gccctgaaag atttatgagg
540
taatgttcac ttcactcctgt gcttcttttc ctagatgtga actatgaaga ctttactttc
600
accataccag atgtagagga ctcaagtcag agaccagatc agggaccca gagacctcct
660
cctgaaggac tcctacctag accccctggt gatagtggta accaagatga tggctcctcag
720
cagagaccac caaaaccagg aggccatcac cgccatcctc cccacctcc ttttcaaat
780
cagcaacgac caccccaacg aggacaccgt caactctctc taccctgatt tccttctgtc
840
agcctgcagg aagcatcatc attcttccgg agggacagac cagcaagaca tcccaggag
900
caaccactct ggtaatctag aattcagtgg cagaaaataa ataagaagat aacttccttc
960
agaaagccat gacattgaaa taatgtggtc ataactcttt cttcagtata ccaataaaat
1020
attaatagca tgcggaagaa agaatgggtt gcatccacat ggagagtgtg ccatttagag
1080

```

gtaacagggga gaggagaggg tgtgccatca agaggcaaca tggaggtgtt tcaaacctat
1140
gcatcttggt ataatatat ctttgctcac atgaatttta cttgttaatt agcctggctg
1200
gggtgaatgg taacaggaga gaaatggaag agaataggga gcactgcgcc agcattaaca
1260
gtcactgtc t
1271

<210> 2792

<211> 123

<212> PRT

<213> Homo sapiens

<400> 2792

Cys	Ser	Leu	His	Pro	Val	Leu	Leu	Phe	Leu	Asp	Val	Asn	Tyr	Glu	Asp
1				5					10					15	
Phe	Thr	Phe	Thr	Ile	Pro	Asp	Val	Glu	Asp	Ser	Ser	Gln	Arg	Pro	Asp
			20					25					30		
Gln	Gly	Pro	Gln	Arg	Pro	Pro	Pro	Glu	Gly	Leu	Leu	Pro	Arg	Pro	Pro
		35					40					45			
Gly	Asp	Ser	Gly	Asn	Gln	Asp	Asp	Gly	Pro	Gln	Gln	Arg	Pro	Pro	Lys
	50				55						60				
Pro	Gly	Gly	His	His	Arg	His	Pro	Pro	Pro	Pro	Pro	Phe	Gln	Asn	Gln
65					70					75				80	
Gln	Arg	Pro	Pro	Gln	Arg	Gly	His	Arg	Gln	Leu	Ser	Leu	Pro	Arg	Phe
			85					90						95	
Pro	Ser	Val	Ser	Leu	Gln	Glu	Ala	Ser	Ser	Phe	Phe	Arg	Arg	Asp	Arg
			100					105						110	
Pro	Ala	Arg	His	Pro	Gln	Glu	Gln	Pro	Leu	Trp					
			115				120								

<210> 2793

<211> 847

<212> DNA

<213> Homo sapiens

<400> 2793

gcgcgccgac ttccgggctcc tcctcccggc tccgtagtaa gcatggcggc ggccggcggtc
60
gtgggtccctc gggtgaaaca gaaagcggga gctacgcgga gagggagcga agagcggggc
120
tgaggcgccg gcgtcactgc caggaaacaa cccaacagt cagcgcgccg gcggccgcgg
180
cgccctgag agctgactct gcagctgagg tagagagaca acgatcagga accctaagaa
240
gaggcgccag aggagccgcc ttctgcttca gaacggcgtg actcggagaa ttggagcggt
300
attcagtata ttaatgtctt attgataatg gcagaacatc caccactact ggatacaact
360
cagatcttaa gtagtgatat ttctcttttg tctgccccta ttgtaagtgc agatggaaca
420
caacaggtta ttctggtaca agttaaccca ggagaagcat ttacaataag aagagaagat
480

ggacagtttc agtgcattac aggtcctgct caggttccaa tgatgtcccc aaatggttct
 540
 gtgcctccta tctatgtgcc tcctggatat gccccacagg ttattgaaga caatggtggt
 600
 cgaagagttg tcgtggtecc tcaggcacca gagtttcacc ctggtagtca cacagttctc
 660
 caccgttctc cacatectcc tctacctggt ttcattcctg tcccaactat gatgccgcct
 720
 caccacgtca tatgtactca cccgtgactg gagctggaga catgacaaca cagtatatgc
 780
 cncagtatca gtcttcacaa gtctatggag atgtagatgc tcactctaca catggccctt
 840
 cacgcgt
 847

<210> 2794
 <211> 139
 <212> PRT
 <213> Homo sapiens

<400> 2794
 Met Ala Glu His Pro Pro Leu Leu Asp Thr Thr Gln Ile Leu Ser Ser
 1 5 10 15
 Asp Ile Ser Leu Leu Ser Ala Pro Ile Val Ser Ala Asp Gly Thr Gln
 20 25 30
 Gln Val Ile Leu Val Gln Val Asn Pro Gly Glu Ala Phe Thr Ile Arg
 35 40 45
 Arg Glu Asp Gly Gln Phe Gln Cys Ile Thr Gly Pro Ala Gln Val Pro
 50 55 60
 Met Met Ser Pro Asn Gly Ser Val Pro Pro Ile Tyr Val Pro Pro Gly
 65 70 75 80
 Tyr Ala Pro Gln Val Ile Glu Asp Asn Gly Val Arg Arg Val Val Val
 85 90 95
 Val Pro Gln Ala Pro Glu Phe His Pro Gly Ser His Thr Val Leu His
 100 105 110
 Arg Ser Pro His Pro Pro Leu Pro Gly Phe Ile Pro Val Pro Thr Met
 115 120 125
 Met Pro Pro His His Val Ile Cys Thr His Pro
 130 135

<210> 2795
 <211> 1022
 <212> DNA
 <213> Homo sapiens

<400> 2795
 ngccggcgct gccagcagtt gtagagcagg ccaagcgcaa tgatgatgat gcagatggcc
 60
 ccaatgacca ccagcaccac gaagagcgtg ccgtagtgcg tgcgcacctg gctggcccgc
 120
 gcctggcagc tgctggttgt ggaatagttc tggatgccaa tctcctccag gctcctgcgg
 180
 atgtcaccca gcatggaaag gacatcttga gtgggcacca cccctgctc gccaccagt
 240

gtcattgagaa ggtgctgctc cttctcgctg ggcttgctca gagagatgtg ccaggcccca
 300
 tggtagccac tgccatggcg gggcagcacc tcttccacca gggccaggag ctgtggcccc
 360
 cggtagctgcc ggaacacctc acagtctatg ttctctgtca tgttcagaat gatgtagttt
 420
 ttcccagcca gattgtccca gtccttgacg atcacctgag tagaatccca gggatatcctg
 480
 gattgagctt cagctgcctg cccttctagg agctgctggg tgagatcttc ttgtcccaag
 540
 gtagcagagg aagggtgtcag ttccatgtct ccaggggcca gtggggaaga ggctgaggtt
 600
 ctagagccaa ggggatcttc atctgggtgc tcggcccccac tgggagctgt ggtttgaggg
 660
 aatgaaggca aggccggcac ctctctgtgc tggccagaca aaccagctgc tctgcagtg
 720
 gcttctctgc ttgcttctg aggagcctcg aactctaccc caagccctgc agctggcagc
 780
 actgtggcct ctgcctcttg gctgggtggg tctgtgtccc ccggagtcac tgtagttggg
 840
 gtgactgaag gcagcagcaa gctgggcccc atgctgctct ccacctcatc aggtgagnna
 900
 gaaaagtcac ggacctgagg cttggcttct tcttgggacg cattcacagg gacagctcc
 960
 tctcttctct cctctcttg tttctctacc tcttcttct cctctctctc ccttccagc
 1020
 gt
 1022

<210> 2796

<211> 56

<212> PRT

<213> Homo sapiens

<400> 2796
 Ala Ser Ala Ala Cys Pro Ser Arg Ser Cys Trp Leu Arg Ser Ser Cys
 1 5 10 15
 Pro Lys Val Ala Glu Glu Gly Val Ser Ser Met Ser Pro Gly Ala Ser
 20 25 30
 Gly Glu Glu Ala Glu Val Leu Glu Pro Arg Gly Ser Ser Ser Gly Cys
 35 40 45
 Ser Ala Pro Leu Gly Ala Val Val
 50 55

<210> 2797

<211> 475

<212> DNA

<213> Homo sapiens

<400> 2797

cggccgctgc tgattgcctt cagcgctgc accacgggtgc tggtagccgt gcacctgttc
 60
 gccctctca tcagcacctg catcctgcc aatgtggagg ccgtgagcaa catccacaac
 120

ctgaactcca tcagcgagtc cccgcgatgag cgcatgcacc cctacatcga gctggcctgg
 180
 ggcttctcca ccgtgcttgg catcctactc ttctctggccg aggtgggtgct gctctgctgg
 240
 atcaagttcc tccccgtgga tgcccggcgc cagcctggcc cccacactgg ccctggggagt
 300
 cacacgggct ggcaggccgc cctgggtgtcc accatcatca tgggtgcccg gggcctcatc
 360
 ttctggttct tcaccatcca cttctaccgc tccttgggtgc gccacaaaac ggagcgccac
 420
 aaccgcgaga tcgaggagct ccacaagctc aaggtccagc tggacgggca tgagc
 475

<210> 2798

<211> 158

<212> PRT

<213> Homo sapiens

<400> 2798

Arg	Pro	Leu	Leu	Ile	Ala	Phe	Ser	Ala	Cys	Thr	Thr	Val	Leu	Val	Ala
1				5				10						15	
Val	His	Leu	Phe	Ala	Leu	Leu	Ile	Ser	Thr	Cys	Ile	Leu	Pro	Asn	Val
		20						25					30		
Glu	Ala	Val	Ser	Asn	Ile	His	Asn	Leu	Asn	Ser	Ile	Ser	Glu	Ser	Pro
		35					40					45			
His	Glu	Arg	Met	His	Pro	Tyr	Ile	Glu	Leu	Ala	Trp	Gly	Phe	Ser	Thr
	50					55					60				
Val	Leu	Gly	Ile	Leu	Leu	Phe	Leu	Ala	Glu	Val	Val	Leu	Leu	Cys	Trp
65				70					75					80	
Ile	Lys	Phe	Leu	Pro	Val	Asp	Ala	Arg	Arg	Gln	Pro	Gly	Pro	Pro	Pro
			85					90						95	
Gly	Pro	Gly	Ser	His	Thr	Gly	Trp	Gln	Ala	Ala	Leu	Val	Ser	Thr	Ile
			100					105					110		
Ile	Met	Val	Pro	Val	Gly	Leu	Ile	Phe	Val	Val	Phe	Thr	Ile	His	Phe
		115				120					125				
Tyr	Arg	Ser	Leu	Val	Arg	His	Lys	Thr	Glu	Arg	His	Asn	Arg	Glu	Ile
	130					135					140				
Glu	Glu	Leu	His	Lys	Leu	Lys	Val	Gln	Leu	Asp	Gly	His	Glu		
145				150						155					

<210> 2799

<211> 2872

<212> DNA

<213> Homo sapiens

<400> 2799

ntatctttcg attcatctgt ggggtttcgg tttggaatga ccagcttgca aggcagggcc
 60
 aatgggatga tggagtgtg gtagaccagg gcagacagcg atccgaagtt tgggtcattg
 120
 gggcagccct tgagcttgac tcctctgggg ccagtctcta tcagaaaatg cctgaccagc
 180
 tcatgggtca tgtctccttt tttattctgc tgcattgatg ttggaggtgg cgaagacacc
 240

ttcatggcca gcccgtaaa gctgagatc tccagggagc aggccatcgc gctcctcaag
300
gaccaggagc cgggggcctt catcatccgc gacagtcact ccttccgagg cgcgtacggg
360
ctggccatga aggtgtcttc gccacctcca accatcatgc agcagaataa aaaaggagac
420
atgacccatg agctgggtcag gcattttctg atagagactg gcccagagg agtcaagctc
480
aagggtgcc ccaatgagcc aaacttcgga tcgctgtctg ccctgggtcta ccagcactcc
540
atcatcccat tggccctgcc ttgcaagctg gtcattccaa accgagaccc cacagatgaa
600
tcgaaagata gctccggccc tgccaactca actgcagacc tgctgaaaca aggggcagcc
660
tgcaatgtgc tcttcatcaa ctctgtggac atggagtcac tcttgggcc acagggccatc
720
tctaaagcca catctgagac gttggctgca gacccacgc cagctgccac catcgttcac
780
ttcaaagtct ctgcccaggg aatcactctg actgacaacc agagaaagct ctttttcaga
840
cgccactacc ctctcaacac tgtcaccttc tgtgacctgg atccacagga aagaaagtgg
900
atgaaaacag aggggtggtgc ccctgctaag ctcttcggct tcgtggcccc gaagcagggc
960
agcaccacgg acaacgcctg ccacctcttt gctgagcttg accccaacca gccggcctct
1020
gccatcgtca acttcgtctc caaggctcatg ctgaatgccg gccaaaagag atgaaccctg
1080
ccccttgccc agggccagtg ccatggggaa ggggcttgtg gggaggggac ccatgaatcc
1140
tgaccactct tgaaccaga aggaggactt tgggccaatt tcggaggaga gaagaaagtg
1200
caacgtgggg agagggaagt gaattgcaga ggggaggggg aaaagagaga gagagagaga
1260
gagagagaga gagagagaga gagaaagatg gaggagaaga acttggtatc ccctgggtag
1320
atggaaactg caaaaaccca aagcctccaa aactaaccag gtccaccta caccctctc
1380
ctccccctaa aagatggatg tcctcaaaag agaaggaaca aacctccttg ggaatccaca
1440
ttttttgggg gaatggaaaa gctctgtctc cctaactcaa ctgctttgca aggggaaatc
1500
aagctgggag aatctttttt tggccacctg tggggtagggt tgtcaaacca aacagagcca
1560
cgtgggaca tcaagtggaa gaacttgttt gcttgaaagt atctcagacc caaggcacct
1620
caggtctctt tgctgtgcct ccactatatt gtcgtgtggg tgtgtgtctg caccacatc
1680
ctcacacatt gatctagatc tgcttttate cactcgaatt ataaacagct cggcttgtcc
1740
ttgtcccatg tgtttgtaga cacacatgca tactgtccaa agattagggg tgggtggggc
1800
agtgcagcag gggagggaca aacaaccaag ctatgggtga cagaggtct ctcctgggtg
1860

ctgcacctgc actctagtga ccttgggtgc cgccagaccc ttctcttcta caaagacccc
 1920
 agcaggagtg ggagggtctg caatggcatc gccctgtcct gccttggcca gaagcctgga
 1980
 gctttggttt gaggaggtag agatatgtgt atccatagga agagatctgt cagaacaggc
 2040
 agctgttgag ctctgggtgt cttccccaag gcatgtggct cagcagcaag aaaggcaagt
 2100
 tgctcctgct ggggccctgg actctgcctt agctcccacc tctcagcctt gttattgggt
 2160
 ttcattgccc tggaccagcc ttatctcaga cctgcttacc tgcattgatgc ctttttgggg
 2220
 gctggggatt gactcttgcg gctctgccc gccctgttct attctgcagg gtccctgtgt
 2280
 tggaattctc cctggggaac ctactttctg ctcatgtagg ctccggccag aaacctggag
 2340
 tccttatcct cccctctgta agtggttttag ggtctggctt ttgcaggcac cctctgacct
 2400
 cagcagagct cctgggcctg ctgcctgcac accacatcgc ctacctataa tgccaaagcc
 2460
 tcactgtcac cttttctgcc ttggtttccc tagctgagcc acgctgccc tgcagcagag
 2520
 ggcaagaaggc ttgcacttgg gccaaagggc ctaagggtcca ctggacagtt gggaaaacac
 2580
 ctgaccacca tttaaggact ctaagccaga atggaaaatt caccaggact ccattcttaa
 2640
 gcctatgcga gtcccctaga gagaggcatt gtactgatat ataaatatta tataatatat
 2700
 acatgagaca tactgacaga atctgtaagc taataaaatg taagaaaagg ttaaaaaaag
 2760
 aataggtaaa ttgacaagaa gtattttattg tttttccata ttgctttatt gccttccttg
 2820
 gggataaacc aattcctatc cttttttata tgtgtaagta aagcctgaag tg
 2872

<210> 2800

<211> 294

<212> PRT

<213> Homo sapiens

<400> 2800

Met	Ser	Pro	Phe	Leu	Phe	Cys	Cys	Met	Met	Val	Gly	Gly	Gly	Glu	Asp
1				5				10						15	
Thr	Phe	Met	Ala	Ser	Pro	Tyr	Lys	Pro	Glu	Ile	Ser	Arg	Glu	Gln	Ala
			20					25					30		
Ile	Ala	Leu	Leu	Lys	Asp	Gln	Glu	Pro	Gly	Ala	Phe	Ile	Ile	Arg	Asp
		35				40					45				
Ser	His	Ser	Phe	Arg	Gly	Ala	Tyr	Gly	Leu	Ala	Met	Lys	Val	Ser	Ser
	50				55			60							
Pro	Pro	Pro	Thr	Ile	Met	Gln	Gln	Asn	Lys	Lys	Gly	Asp	Met	Thr	His
65				70				75					80		
Glu	Leu	Val	Arg	His	Phe	Leu	Ile	Glu	Thr	Gly	Pro	Arg	Gly	Val	Lys
			85					90					95		
Leu	Lys	Gly	Cys	Pro	Asn	Glu	Pro	Asn	Phe	Gly	Ser	Leu	Ser	Ala	Leu

100 105 110
 Val Tyr Gln His Ser Ile Ile Pro Leu Ala Leu Pro Cys Lys Leu Val
 115 120 125
 Ile Pro Asn Arg Asp Pro Thr Asp Glu Ser Lys Asp Ser Ser Gly Pro
 130 135 140
 Ala Asn Ser Thr Ala Asp Leu Leu Lys Gln Gly Ala Ala Cys Asn Val
 145 150 155 160
 Leu Phe Ile Asn Ser Val Asp Met Glu Ser Leu Thr Gly Pro Gln Ala
 165 170 175
 Ile Ser Lys Ala Thr Ser Glu Thr Leu Ala Ala Asp Pro Thr Pro Ala
 180 185 190
 Ala Thr Ile Val His Phe Lys Val Ser Ala Gln Gly Ile Thr Leu Thr
 195 200 205
 Asp Asn Gln Arg Lys Leu Phe Phe Arg Arg His Tyr Pro Leu Asn Thr
 210 215 220
 Val Thr Phe Cys Asp Leu Asp Pro Gln Glu Arg Lys Trp Met Lys Thr
 225 230 235 240
 Glu Gly Gly Ala Pro Ala Lys Leu Phe Gly Phe Val Ala Arg Lys Gln
 245 250 255
 Gly Ser Thr Thr Asp Asn Ala Cys His Leu Phe Ala Glu Leu Asp Pro
 260 265 270
 Asn Gln Pro Ala Ser Ala Ile Val Asn Phe Val Ser Lys Val Met Leu
 275 280 285
 Asn Ala Gly Gln Lys Arg
 290

<210> 2801
 <211> 549
 <212> DNA
 <213> Homo sapiens

<400> 2801
 ggggcaagtg tcagtcagga cgggagtcgc gcggtttaca gcggaggcct aggtggcaga
 60
 cagggggccc gggccgctgc gtgttggtcca cccaagatgg agttcctcct ggggaacccg
 120
 ttcagcacac cagtggggca gtgcctcgaa aaggcaacag atggctccct gcaaagtga
 180
 gattggacgt tgaatatgga gatctgtgac atcatcaatg agacggagga agggccaaag
 240
 gatgccattc gagccctgaa gaagcggctc aacgggaacc ggaactacag agaggtgatg
 300
 ctggcattaa cagtgtgga gacatgtgtg aagaactgtg gccaccgctt ccacatcctt
 360
 gtggccaacc gagatttcat cgacagtgtt ctgggtcaaaa ttatatctcc caagaacaac
 420
 cctcccacca ttgtacagga caaagtgtt gctctgatcc aggcattggc tgatgccttt
 480
 cgaagcagtc ctgatctcac cggcgttgtg cacatatatg aggagctgaa gaggaaaggg
 540
 gttgaattc
 549

<210> 2802

<211> 151
 <212> PRT
 <213> Homo sapiens

<400> 2802

Met	Glu	Phe	Leu	Leu	Gly	Asn	Pro	Phe	Ser	Thr	Pro	Val	Gly	Gln	Cys
1				5					10					15	
Leu	Glu	Lys	Ala	Thr	Asp	Gly	Ser	Leu	Gln	Ser	Glu	Asp	Trp	Thr	Leu
			20					25					30		
Asn	Met	Glu	Ile	Cys	Asp	Ile	Ile	Asn	Glu	Thr	Glu	Glu	Gly	Pro	Lys
		35					40					45			
Asp	Ala	Ile	Arg	Ala	Leu	Lys	Lys	Arg	Leu	Asn	Gly	Asn	Arg	Asn	Tyr
	50					55					60				
Arg	Glu	Val	Met	Leu	Ala	Leu	Thr	Val	Leu	Glu	Thr	Cys	Val	Lys	Asn
65					70					75					80
Cys	Gly	His	Arg	Phe	His	Ile	Leu	Val	Ala	Asn	Arg	Asp	Phe	Ile	Asp
			85						90					95	
Ser	Val	Leu	Val	Lys	Ile	Ile	Ser	Pro	Lys	Asn	Asn	Pro	Pro	Thr	Ile
			100					105					110		
Val	Gln	Asp	Lys	Val	Leu	Ala	Leu	Ile	Gln	Ala	Trp	Ala	Asp	Ala	Phe
		115					120					125			
Arg	Ser	Ser	Pro	Asp	Leu	Thr	Gly	Val	Val	His	Ile	Tyr	Glu	Glu	Leu
	130					135					140				
Lys	Arg	Lys	Gly	Val	Glu	Phe									
145					150										

<210> 2803
 <211> 459
 <212> DNA
 <213> Homo sapiens

<400> 2803

```

nccatggcca cgctgggct ccagcagcat cagcagcccc caggaccggg gaggcacagg
60
tgccccccac caccggagg agcagctcct gcccctgtcc gggggatgac tgattctcct
120
ccgccagccg tagggtgtgt gctgtccggg ctcacgggga cctgtctcct gagtcgttcg
180
tgcagcgtgt gtaccagccc ttcctcacca cctgcgacgg gcaccggggc tgcagcacct
240
accgcaatat gccagccgcc atgccggaac ggaggagct gtgtccagcc tggccgctgc
300
cgtgccctg caggatggcg gggtagact tgccagtcag atgtggacna gtgcaatgaa
360
ggaagaagtg cagaggctgc agtccagggt ggacctgctg gaggagaagc tgcagctggg
420
actggcccca ctgcacagcc tggcctcgca ggcaactgga
459

```

<210> 2804
 <211> 153
 <212> PRT
 <213> Homo sapiens

<400> 2804

```

Xaa Met Ala Thr Pro Gly Leu Gln Gln His Gln Gln Pro Pro Gly Pro
 1           5           10           15
Gly Arg His Arg Trp Pro Pro Pro Pro Gly Gly Ala Ala Pro Ala Pro
          20           25           30
Val Arg Gly Met Thr Asp Ser Pro Pro Pro Ala Val Gly Cys Val Leu
          35           40           45
Ser Gly Leu Thr Gly Thr Leu Ser Pro Ser Arg Ser Cys Ser Val Cys
          50           55           60
Thr Ser Pro Ser Ser Pro Pro Ala Thr Gly Thr Gly Pro Ala Ala Pro
        65           70           75           80
Thr Ala Ile Cys Gln Pro Pro Cys Arg Asn Gly Gly Ser Cys Val Gln
          85           90           95
Pro Gly Arg Cys Arg Cys Pro Ala Gly Trp Arg Gly Asp Thr Cys Gln
          100          105          110
Ser Asp Val Asp Xaa Cys Asn Glu Gly Arg Ser Ala Glu Ala Ala Val
          115          120          125
Gln Gly Gly Pro Ala Gly Gly Glu Ala Ala Ala Gly Thr Gly Pro Thr
          130          135          140
Ala Gln Pro Gly Leu Ala Gly Thr Gly
145           150

```

<210> 2805

<211> 771

<212> DNA

<213> Homo sapiens

<400> 2805

```

nnaaatttct gtgtggtgga gctgctgcct agtgatcctg agtacaacac ggtggcaagc
60
aagtttaatc agacctgctc acacttcaga atagagaaga ttgagaggat ccagaatcca
120
gatctctgga atagctacca ggcaaagaaa aaaactatgg atgccaagaa tggccagaca
180
atgaatgaga agcaactctt ccatggggaca gatgccggct ccgtgccaca cgtcaatcga
240
aatggcttta accgcagcta tgccggaaaag aatgctgtgg catatggaaa gggaacctat
300
tttgctgtca atgccaatta ttctgccaat gatacgtact ccagaccaga tgcaaatggg
360
agaaagcatg tgtattatgt gcgagtactt actggaatct atacacatgg aaatcattca
420
ttaattgtgc ctcttcaaaa gaacctcaa aatcctactg acctgtatga cactgtcaca
480
gataatgtgc accatccaag tttatttgtg gcattttatg actaccaagc ataccagag
540
taccttatta cgtttagaaa ataacacttt ggtatccttc ccacaaaatt attctccatt
600
tgtacatatc tagttgtaaa acaagtttta gctttttttt ttaattcttc ttaacagatt
660
tttctaatat ccaaggatca ttctttgtcg ctgcagtcag atctttcttc agcttctctt
720
tcataatgga aatgaactta ttatcttgag agccaaataa cttggaaatt t
771

```


<210> 2806
 <211> 187
 <212> PRT
 <213> Homo sapiens

<400> 2806
 Xaa Asn Phe Cys Val Val Glu Leu Leu Pro Ser Asp Pro Glu Tyr Asn
 1 5 10 15
 Thr Val Ala Ser Lys Phe Asn Gln Thr Cys Ser His Phe Arg Ile Glu
 20 25 30
 Lys Ile Glu Arg Ile Gln Asn Pro Asp Leu Trp Asn Ser Tyr Gln Ala
 35 40 45
 Lys Lys Lys Thr Met Asp Ala Lys Asn Gly Gln Thr Met Asn Glu Lys
 50 55 60
 Gln Leu Phe His Gly Thr Asp Ala Gly Ser Val Pro His Val Asn Arg
 65 70 75 80
 Asn Gly Phe Asn Arg Ser Tyr Ala Gly Lys Asn Ala Val Ala Tyr Gly
 85 90 95
 Lys Gly Thr Tyr Phe Ala Val Asn Ala Asn Tyr Ser Ala Asn Asp Thr
 100 105 110
 Tyr Ser Arg Pro Asp Ala Asn Gly Arg Lys His Val Tyr Tyr Val Arg
 115 120 125
 Val Leu Thr Gly Ile Tyr Thr His Gly Asn His Ser Leu Ile Val Pro
 130 135 140
 Pro Ser Lys Asn Pro Gln Asn Pro Thr Asp Leu Tyr Asp Thr Val Thr
 145 150 155 160
 Asp Asn Val His His Pro Ser Leu Phe Val Ala Phe Tyr Asp Tyr Gln
 165 170 175
 Ala Tyr Pro Glu Tyr Leu Ile Thr Phe Arg Lys
 180 185

<210> 2807
 <211> 1660
 <212> DNA
 <213> Homo sapiens

<400> 2807
 tttttttttt ttttttttta aatgacacca gagggcttca ttgcaggtca ataggcctgt
 60
 caccatcacc ccacagcgag caagtctttt gttccctcag ctcttgcgac aaagtcagaa
 120
 cccaggtgct cagggccgcc tgtgaatgca ggtgccttgt cccaaacaga ggacatatta
 180
 atagggccat gatttcctgt tgccacaatt ttgccaaaggc aggctggcac cagaacacca
 240
 aagaagggaa attatagtgg agtagcagtt tgtgaatctg gagtccttgg ttcaatcaca
 300
 gaacaagtag ggagaggagc caggacctag gccttcaggt tttcagcaag gaaggactct
 360
 caggccatcc ttgcagttca gttaacagga ggaagcaagg atccccagag agctggagta
 420
 ctctgactct cggatagaaa ggcaggacaa tcggagcctg gggttcacgt gagtcaggaa
 480

agggagctct ccacactgga atcgctgtag ccgaggaggt tctaattgga cgatcttcga
 540
 cggtttcctt tccagctcaa aagaaagcac aataggacgg aggacagagg ggctagtaca
 600
 aagtgtccag aggaacatgg tcatgggctc gtcaaccctg gctgaagact caagttgggc
 660
 tccaggccct gcaaactgca agaccactct gcctggcact tggacgaaat ctaggaggga
 720
 ggcccactct ctaggacaca gccctagtgc tgctgccaca tggtgattcc tacaggtcac
 780
 cagggttcg gcagtcccat cctccaccag gagcctgatg atggcctggc ttatagctgt
 840
 ctgcgtaggg caagtggagc ccaggcgagt gcactttccc tgccggcaga tgctggtaca
 900
 ataagcacac acccagaaga gctgaaggct gaagacagag acgatatggc aagaggcagt
 960
 ggccctggaat ggggactgac caccctgcag aagttcagcc aggtagatgt ggggcagggg
 1020
 aacgctgatg gtggtctcag ggggaaaact caggacctgc acataagtgg atgaccggaa
 1080
 acaacaataa acattgtgag atctggaaac ccttttctcc aactggctga agtggaccgg
 1140
 ggctcctgga agtagtccta gtgagggagg caagtgtggg tcttctatat atacatccag
 1200
 gtgagggggg aattcacatt cagcagtctc aagagcgact gttagcttca cacaccttct
 1260
 catggccccc gtgttcccca gtttcatcca gagagacgcc acaaggggtt cacatagtgt
 1320
 ccgtgacaaa atctcagcgg agaaagacac caaggaatct gtgaaattgt cactgagcag
 1380
 gtcggtcagt gaggattcag gcaatgactt gtttgcattc agcacatctt ggatatcctg
 1440
 ggagctttca agctccagag tccagttgtc ctggacagtg aggcaggatg cacaaccagc
 1500
 caactccaga ggacgccgag atatgcagga tgaaccatcc ttttcaaaca acattggtgt
 1560
 agcggggcca ggagctacga gtcggtacac ctgtcccggg tgcaagaact caaaccagcg
 1620
 gactgaagag ccaaagaaaa tgaggtgaac cctctgatca
 1660

<210> 2808
 <211> 390
 <212> PRT
 <213> Homo sapiens

<400> 2808
 Met Leu Phe Glu Lys Asp Gly Ser Ser Cys Ile Ser Arg Arg Pro Leu
 1 5 10 15
 Glu Leu Ala Gly Cys Ala Ser Cys Leu Thr Val Gln Asp Asn Trp Thr
 20 25 30
 Leu Glu Leu Glu Ser Ser Gln Asp Ile Gln Asp Val Leu Asp Ala Asn
 35 40 45
 Lys Ser Leu Pro Glu Ser Ser Leu Thr Asp Leu Leu Ser Asp Asn Phe

50		55		60
Thr Asp Ser Leu Val	Ser Phe Ser Ala Glu Ile	Leu Ser Arg Thr Leu		
65	70	75	80	
Cys Glu Pro Leu Val	Ala Ser Leu Trp Met Lys	Leu Gly Asn Thr Gly		
	85	90	95	
Ala Met Arg Arg Cys Val	Lys Leu Thr Val Ala	Leu Glu Thr Ala Glu		
	100	105	110	
Cys Glu Phe Pro Pro His	Leu Asp Val Tyr Ile	Glu Asp Pro His Leu		
	115	120	125	
Pro Pro Ser Leu Gly Leu	Leu Pro Gly Ala Arg	Val His Phe Ser Gln		
	130	135	140	
Leu Glu Lys Arg Val Ser	Arg Ser His Asn Val	Tyr Cys Cys Phe Arg		
145	150	155	160	
Ser Ser Thr Tyr Val Gln	Val Leu Ser Phe Pro	Pro Glu Thr Thr Ile		
	165	170	175	
Ser Val Pro Leu Pro His	Ile Tyr Leu Ala Glu	Leu Leu Gln Gly Gly		
	180	185	190	
Gln Ser Pro Phe Gln Ala	Thr Ala Ser Cys His	Ile Val Ser Val Phe		
	195	200	205	
Ser Leu Gln Leu Phe Trp	Val Cys Ala Tyr Cys	Thr Ser Ile Cys Arg		
	210	215	220	
Gln Gly Lys Cys Thr Arg	Leu Gly Ser Thr Cys	Pro Thr Gln Thr Ala		
225	230	235	240	
Ile Ser Gln Ala Ile Ile	Arg Leu Leu Val Glu	Asp Gly Thr Ala Glu		
	245	250	255	
Ala Val Val Thr Cys Arg	Asn His His Val Ala	Ala Ala Leu Gly Leu		
	260	265	270	
Cys Pro Arg Glu Trp Ala	Ser Leu Asp Phe Val	Gln Val Pro Gly		
	275	280	285	
Arg Val Val Leu Gln Phe	Ala Gly Pro Gly Ala	Gln Leu Glu Ser Ser		
	290	295	300	
Ala Arg Val Asp Glu Pro	Met Thr Met Phe Leu	Trp Thr Leu Cys Thr		
305	310	315	320	
Ser Pro Ser Val Leu Arg	Pro Ile Val Leu Ser	Phe Glu Leu Glu Arg		
	325	330	335	
Lys Pro Ser Lys Ile Val	Pro Leu Glu Pro Pro	Arg Leu Gln Arg Phe		
	340	345	350	
Gln Cys Gly Glu Leu Pro	Phe Leu Thr His Val	Asn Pro Arg Leu Arg		
	355	360	365	
Leu Ser Cys Leu Ser Ile	Arg Glu Ser Glu Tyr	Ser Ser Ser Leu Gly		
	370	375	380	
Ile Leu Ala Ser Ser Cys				
385	390			

<210> 2809

<211> 1502

<212> DNA

<213> Homo sapiens

<400> 2809

ncattttttg gcatttgtgt ttagaaccag gaggaaggcg gaaggtaggg agggagggct
60
gggtccccctc tgagggggct ctagtgcctg accctgatct gtcctcattc gacagctgaa
120

actgttaagc gctggcccag tccccccacc ccaccagcc gtgtactgcc tgggetcccc
180
tcaaagggaa attttttacgg aaacatcttg gcagcaagtg gaaaaagatc tatggcccat
240
gaaccaactg aaaactccaa gaacctctg tctgectctg ccagcagcga gtcctaagcg
300
cagaatccag agctcgtagc tgtcctcagc tgtaactact gtttcagaat gttgctgctg
360
catacatttg tcatgtcagc cagccagctc cgtgggtgag agtggtgctg tgcgctgctc
420
tgtgtgtgtg tgcgtctgtg tgtgctgctc tgtgtgtgtg cacgtctgtg cgtctgtgtg
480
tgcgctctg tgtgctgctg tgtctgtgctg tgtgtgctc tgtgtgtgctg tctgtgctg
540
tgtgtgtgctg cgtctgtgtg tatgtgtgca cgcgccngcg tctgtgtgtg cacgtgctg
600
nntctctgca cgcgtgtctg tgtatgtgtg cacgctgtgtg tctgtgtgtg tgcacgctg
660
tgcacgtcac caccggagca tttaggggtt ggtacaagat gggtctaaaa tggcaaaggt
720
ttttcgtgtt tgtttggttt gtttcttttg aaaaagaaaa ggaaaggaaa atcatgcaga
780
atcgcaagca ttcagactgg acgaccggct cgtattccga tcagtcgctt ccattgttag
840
catcgtaac gattgtgatt tttatgtcaa aagaagccaa aacttgcaat actattttta
900
gcagacaaaa aaaagaacta agtataaaat gtataaatat ttttgacttg aacatttgga
960
tggcactggg tgcaagtaga gcatccatcc ttcggatgga atgtttggaa aaaagagact
1020
tttaaaaagg agacggttgt tttaaagagt ctgttttaggg gttaaagtac tgtaactcac
1080
gactgttaaa aaataaattt tcctgtgctg taaaggaagg tttcacagta ccactgagtt
1140
agatttcagc cacagatgct tagctttttt tttttgtctt ttttttaagg aggaagcctt
1200
tgttttgtt tcctgagccc tcactctgtt tttgtgctgt tactcggtag agtcaagact
1260
gttacttttt agccatggct gacattgtat caataactaa aactgaaaca ttcaaaagcg
1320
aacaggggaaa ccgaggggctt caagcgtgct cagagccgtt tcagacagtg gaaatccatg
1380
acaaacaaaa ggatgtgatc attaatgtga aagcgttttg taaaattcac atttacaaaa
1440
taataaagtc agttcaaacc taaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
1500
aa
1502

<210> 2810

<211> 102

<212> PRT

<213> Homo sapiens

<400> 2810

Glu Cys Ala Cys Ala Arg Val Cys Val Cys Val Arg Leu Cys Val Arg
 1 5 10 15
 Val Cys Val Cys Ala Arg Leu Cys Val Cys Val Cys Ala Ser Val Cys
 20 25 30
 Ala Cys Val Cys Ala Cys Val Arg Leu Cys Val Arg Leu Cys Ala Cys
 35 40 45
 Val Cys Ala Ser Val Cys Met Cys Ala Arg Ala Xaa Val Cys Val Cys
 50 55 60
 Thr Cys Val Xaa Leu Cys Thr Arg Val Cys Val Cys Val His Ala Cys
 65 70 75 80
 Val Cys Val Cys Ala Arg Ala Cys Thr Ser Pro Pro Glu His Leu Gly
 85 90 95
 Phe Gly Thr Arg Trp Phe
 100

<210> 2811

<211> 591

<212> DNA

<213> Homo sapiens

<400> 2811

nnacgcgtgt aggttgggtg cacttacaag taagtataaa ctgctcttca attcaagttt
 60
 attaattgctg cccaccccca gggtttttaat ccggtctggg cagaagcggg cgataaaagc
 120
 caaaggagac cataaagtgt aggatatttc ctggttagtg gctgccgggt aatcacgatg
 180
 catccatctt cctcggcgtc gcagccctca gtagccagaa ggcagtctcc ttccctgggg
 240
 ggcaaaagcc ccgagccag cctgccnngt tgccccgctc ccgcggtgga tgaacctcaa
 300
 cccnnttccc aggtctctcc tggccccagg gtcccaggac ccccgagacc ctgggggtgcg
 360
 gcgccactga ggcccagacc gggggaagga gaccctgtca ctcgggagcg gagccctgtc
 420
 ccgggagcga cggaatgcc tcctccacgc cccaaggttc ctgctccgcc aggcccaacc
 480
 ggaaggagtc ctcgggcgcg agtggggcac caccgggccc ccggccctcc aggtgctgtg
 540
 gggccttctc tcagtgggca actggggagc tagccccggg cggccgcaag c
 591

<210> 2812

<211> 131

<212> PRT

<213> Homo sapiens

<400> 2812

Met His Pro Ser Ser Ser Ala Ser Gln Pro Ser Val Ala Arg Arg Gln
 1 5 10 15
 Ser Pro Ser Leu Gly Gly Lys Ser Pro Glu Pro Ser Leu Pro Xaa Cys
 20 25 30
 Pro Ala Pro Ala Val Asp Glu Pro Gln Pro Xaa Ser Gln Ala Pro Pro

35 40 45
 Gly Pro Arg Val Pro Gly Pro Pro Arg Pro Trp Gly Ala Ala Pro Leu
 50 55 60
 Arg Pro Arg Pro Gly Glu Gly Asp Pro Val Thr Arg Glu Arg Ser Pro
 65 70 75 80
 Val Pro Gly Ala Thr Glu Met Pro Pro Pro Arg Pro Lys Val Pro Ala
 85 90 95
 Pro Pro Gly Pro Thr Gly Arg Ser Pro Arg Ala Ala Val Gly His His
 100 105 110
 Arg Ala Ala Gly Pro Pro Gly Cys Val Gly Pro Ser Leu Ser Gly Gln
 115 120 125
 Leu Gly Ser
 130

<210> 2813
 <211> 2417
 <212> DNA
 <213> Homo sapiens

<400> 2813
 ntcatgatct cattcacaat attggtggtc cctgagagtg gagcagtgga gtgattgacg
 60
 tgcttgagtt tgaagagagt taaccactgg aatctctcat gttgtttatt cctccaaaa
 120
 tgctgcagtt cagtgttgct ccagatttta tgcttgct tagatttctc tgttctctaa
 180
 tttgttaagt ttgtctttaa tatttcacag gcttcttga tcatggatgg tgaagatata
 240
 ccagattttt caagttaaaa ggaggaaact gcttattgga aggaactttc cttgaagtat
 300
 aagcaaagct tccaggaagc tcgggatgag ctagtgaat tccaggaagg aagcagagaa
 360
 ttagaagcag agttggaggc acaattagta caggctgaac aaagaaatag agacttgacg
 420
 gctgataacc aaagactgaa atatgaagtg gaggcattaa aggagaagct agagcatcaa
 480
 tatgcacaga gctataagca ggtctcagtg ttagaagatg atttaagtca gactcgggcc
 540
 attaaggagc agttgcataa gtatgtgaga gagctggagc aggccaacga cgacctggag
 600
 cgagccaaaa gggcaacaat agtttctactg gaaactttga acaaactaaa ccaggccatt
 660
 gaacgaaatg catttttaga aagtgaactt gatgaaaagg aatctttggt ggtctctgta
 720
 cagagggttaa aggatgaagc aagagattta aggcaagaac tagcagttcg ggaaagacaa
 780
 caggaagtaa ctagaaagtc ggctcctagc tctccaactc tagactgtga aaagatggac
 840
 tccgccgtcc aagcatcact ttctttgcca gctacccttg ttggcaaagg aacggagaac
 900
 acttttcctt caccgaaagc tataccaaat ggttttggta ccagtccact aactccctct
 960
 gctaggatat cagcactaaa catcgtgggg gatctcttac ggaaagtagg ggctttagaa
 1020

tccaaattag cagcttgacag gaattttgca aaggaccaag catcacgaaa atcctatatatt
1080
tcaggggaatg ttaactgtgg ggtgctgaat ggcaatggca caaagttctc tcgatcaggg
1140
catacatctt tcttcgacaa aggggcagta aacggctttg accccgctcc tctctctcct
1200
ggtctgggct cctcgcgtcc atcgtcagcg ccgggtatgt gcctctcagt gtgtgagtgc
1260
ctagcctcca ggggggctcc tgccctcctc caacaacca ggacaccac gcctcacccc
1320
tcggtgcctg ggcccagccc cgtgcccctc cgtctgcctc cgcacggctg gcagagggca
1380
ggctgcatgc agtggcggt actgggccct gccagcccc ggaactctgc gcgatataa
1440
tactggctat tttctcttct cgcgtagtg ccgttggtt cacatgattg cacttttgtg
1500
ggtcgcaagg tgatacatc gtgtattact tggtcactgg atgcagaagt acccattcat
1560
cacacctgcc ccatagcccc cactctgctg tactgatagg atttagttgt gttttaggac
1620
attgcaaatac ttctagaagt tctcccccac atcaggtcaa tgtgtgccct cctgagctcc
1680
caccaggca tctccagtgc tcatgatcat gtgtccccc actccacccc tcacagtttg
1740
ggcctgtttc tggcaaagag tcaggaaggt tactgaatta gggaacattt tctgcacctt
1800
ctgattttac ttaagcagct accattccat ggacttgcct cccagagcag cacaatgccc
1860
gtctgagccc cacgtggcag gagcctctgg gacggggcac acacaggccc agcctctgtg
1920
ctgtctctc ctctgtgcgc ctcagactcg gggtagggga ggcgggcagc ctctcgccag
1980
ccttcccgtc cttcagttca acgacatctt tggagtgtt ttgttttctc ttccaagggc
2040
cgtcccgttg tgtaggaag ggtgagtggc tggttccagg gtgggcccgt gccagctccg
2100
gggtggactg aacagcggcg gctgtccctg tgcattcctt gattactctc atgctgcatt
2160
tactgtttac atttgtttta ttgtacatag gtttgtaaac attattgcct gagatatttg
2220
tatataactt gggctttgta gcttttattt attcagaacg catacggcat gttaatgact
2280
ctgatgggtg cctcctctgg gcagctgtat aggatcatca tgtggttaca aaaaatactt
2340
ccctcaaaaa aattctttta atgtggaaac aataaatttc acagaaaaaa aaaaaaaaaa
2400
aaaaaaaaaa aaaaaaa
2417

<210> 2814

<211> 471

<212> PRT

<213> Homo sapiens

<400> 2814
 Phe Val Lys Phe Val Phe Asn Ile Ser Gln Ala Phe Leu Ile Met Asp
 1 5 10 15
 Gly Glu Asp Ile Pro Asp Phe Ser Ser Leu Lys Glu Glu Thr Ala Tyr
 20 25 30
 Trp Lys Glu Leu Ser Leu Lys Tyr Lys Gln Ser Phe Gln Glu Ala Arg
 35 40 45
 Asp Glu Leu Val Glu Phe Gln Glu Gly Ser Arg Glu Leu Glu Ala Glu
 50 55 60
 Leu Glu Ala Gln Leu Val Gln Ala Glu Gln Arg Asn Arg Asp Leu Gln
 65 70 75 80
 Ala Asp Asn Gln Arg Leu Lys Tyr Glu Val Glu Ala Leu Lys Glu Lys
 85 90 95
 Leu Glu His Gln Tyr Ala Gln Ser Tyr Lys Gln Val Ser Val Leu Glu
 100 105 110
 Asp Asp Leu Ser Gln Thr Arg Ala Ile Lys Glu Gln Leu His Lys Tyr
 115 120 125
 Val Arg Glu Leu Glu Gln Ala Asn Asp Asp Leu Glu Arg Ala Lys Arg
 130 135 140
 Ala Thr Ile Val Ser Leu Glu Thr Leu Asn Lys Leu Asn Gln Ala Ile
 145 150 155 160
 Glu Arg Asn Ala Phe Leu Glu Ser Glu Leu Asp Glu Lys Glu Ser Leu
 165 170 175
 Leu Val Ser Val Gln Arg Leu Lys Asp Glu Ala Arg Asp Leu Arg Gln
 180 185 190
 Glu Leu Ala Val Arg Glu Arg Gln Gln Glu Val Thr Arg Lys Ser Ala
 195 200 205
 Pro Ser Ser Pro Thr Leu Asp Cys Glu Lys Met Asp Ser Ala Val Gln
 210 215 220
 Ala Ser Leu Ser Leu Pro Ala Thr Pro Val Gly Lys Gly Thr Glu Asn
 225 230 235 240
 Thr Phe Pro Ser Pro Lys Ala Ile Pro Asn Gly Phe Gly Thr Ser Pro
 245 250 255
 Leu Thr Pro Ser Ala Arg Ile Ser Ala Leu Asn Ile Val Gly Asp Leu
 260 265 270
 Leu Arg Lys Val Gly Ala Leu Glu Ser Lys Leu Ala Ala Cys Arg Asn
 275 280 285
 Phe Ala Lys Asp Gln Ala Ser Arg Lys Ser Tyr Ile Ser Gly Asn Val
 290 295 300
 Asn Cys Gly Val Leu Asn Gly Asn Gly Thr Lys Phe Ser Arg Ser Gly
 305 310 315 320
 His Thr Ser Phe Phe Asp Lys Gly Ala Val Asn Gly Phe Asp Pro Ala
 325 330 335
 Pro Pro Pro Pro Gly Leu Gly Ser Ser Arg Pro Ser Ser Ala Pro Gly
 340 345 350
 Met Cys Leu Ser Val Cys Glu Cys Leu Ala Ser Arg Gly Ala Pro Ala
 355 360 365
 Leu Leu Gln Gln Pro Arg Thr Pro Thr Pro His Pro Ser Val Pro Gly
 370 375 380
 Pro Ser Pro Val Pro Leu Arg Leu Pro Pro His Gly Trp Gln Arg Ala
 385 390 395 400
 Gly Cys Met Gln Trp Arg Leu Leu Gly Pro Ala Gln Pro Arg Asn Ser
 405 410 415
 Ala Arg Tyr Gln Tyr Trp Leu Phe Ser Leu Leu Ala Val Val Pro Leu

	420		425		430										
Val	Ser	His	Asp	Cys	Thr	Phe	Val	Gly	Arg	Lys	Val	Ile	His	Thr	Cys
	435						440					445			
Ile	Thr	Trp	Ser	Leu	Asp	Ala	Glu	Val	Pro	Ile	His	His	Thr	Cys	Pro
	450					455					460				
Ile	Ala	Pro	Thr	Leu	Leu	Tyr									
465					470										

<210> 2815

<211> 1421

<212> DNA

<213> Homo sapiens

<400> 2815

```

ncagcggagg agagagtggg cgccaccgtg gggctgtccc accggtggag gctccagcgg
60
agatgagctg ggcaggcctc gcggagcaag tgcaaactgc acccgctcc tgggggcatc
120
tgcggggaga cttaggggtc atgctttgtg cccagggcca cccagaggag aaggccaccc
180
cgcctggagg cacaggccat gaggggctct caggaggtgc tgctgatgtg gcttctggtg
240
ttggcagtgg gcggcacaga gcacgcctac cggcccggcc gtaggggtgtg tgctgtccgg
300
gctcacgggg accctgtctc cgagtcgttc gtgcagcgtg tgtaccagcc cttcctcacc
360
acctgcgacg ggcaccgggc ctgcagcacc taccgaacca tctataggac cgcctaccgc
420
cgcagccctg ggctggcccc tgccaggcct cgctacgcgt gctgccccgg ctggaagagg
480
accagcgggc ttcttggggc ctgtggagca gcaatatgcc agccgccatg ccggaacgga
540
gggagctgtg tccagcctgg ccgctgcgcg tgccctgcag gatggcgggg tgacacttgc
600
cagtcagatg tggatgaatg cagtgttagg aggggcggct gtccccagcg ctgcgtcaac
660
accgccggca gttactggtg ccagtgttgg gaggggcaca gcctgtctgc agacggtaca
720
ctctgtgtgc ccaagggagg gccccccagg gtggccccca acccgacagg agtggacagt
780
gcaatgaagg aagaagtgca gaggctgcag tccagggtgg acctgctgga ggagaagctg
840
cagctggtgc tggccccact gcacagcctg gcctcgcagg caggagcatg ggctcccgga
900
ccccggcagc ctctggtgc actccttcca gcagctcggc cgcctcgact ccctgagcga
960
gcagatttcc ttcttgagg agcagctggg gtctgtctcc tgcaagaaag actcngtgac
1020
tgcccagcgc cccaggctgg actgagcccc tcacgccgcc ctgcagcccc catgccctg
1080
cccaacatgc tgggggtcca gaagccacct cggggtgact gagcggaagg ccaggcaggg
1140
ccttctcct ctctctctc ccttctctca ggaggctccc cagaccctgg catgggatgg
1200

```

gctgggatct tctctgtgaa tccaccctg gctaccccca ccttggtac cccaacggca
 1260
 tcccaaggcc aggtgggccc tcagctgagg gaaggtacga gctccctgct ggagcctggg
 1320
 acccatggca caggccaggc agcccggagg ctgggtgggg cctcagtggg ggctgctgcc
 1380
 tgacccccag cacaataaaa atgaaacgtg aaaaaaaaaa a
 1421

<210> 2816

<211> 307

<212> PRT

<213> Homo sapiens

<400> 2816

Met Arg Gly Ser Gln Glu Val Leu Leu Met Trp Leu Leu Val Leu Ala
 1 5 10 15
 Val Gly Gly Thr Glu His Ala Tyr Arg Pro Gly Arg Arg Val Cys Ala
 20 25 30
 Val Arg Ala His Gly Asp Pro Val Ser Glu Ser Phe Val Gln Arg Val
 35 40 45
 Tyr Gln Pro Phe Leu Thr Thr Cys Asp Gly His Arg Ala Cys Ser Thr
 50 55 60
 Tyr Arg Thr Ile Tyr Arg Thr Ala Tyr Arg Arg Ser Pro Gly Leu Ala
 65 70 75 80
 Pro Ala Arg Pro Arg Tyr Ala Cys Cys Pro Gly Trp Lys Arg Thr Ser
 85 90 95
 Gly Leu Pro Gly Ala Cys Gly Ala Ala Ile Cys Gln Pro Pro Cys Arg
 100 105 110
 Asn Gly Gly Ser Cys Val Gln Pro Gly Arg Cys Arg Cys Pro Ala Gly
 115 120 125
 Trp Arg Gly Asp Thr Cys Gln Ser Asp Val Asp Glu Cys Ser Ala Arg
 130 135 140
 Arg Gly Gly Cys Pro Gln Arg Cys Val Asn Thr Ala Gly Ser Tyr Trp
 145 150 155 160
 Cys Gln Cys Trp Glu Gly His Ser Leu Ser Ala Asp Gly Thr Leu Cys
 165 170 175
 Val Pro Lys Gly Gly Pro Pro Arg Val Ala Pro Asn Pro Thr Gly Val
 180 185 190
 Asp Ser Ala Met Lys Glu Glu Val Gln Arg Leu Gln Ser Arg Val Asp
 195 200 205
 Leu Leu Glu Glu Lys Leu Gln Leu Val Leu Ala Pro Leu His Ser Leu
 210 215 220
 Ala Ser Gln Ala Gly Ala Trp Ala Pro Gly Pro Arg Gln Pro Pro Gly
 225 230 235 240
 Ala Leu Leu Pro Ala Ala Arg Pro His Arg Leu Pro Glu Arg Ala Asp
 245 250 255
 Phe Leu Pro Gly Gly Ala Ala Gly Val Leu Leu Leu Gln Glu Arg Leu
 260 265 270
 Xaa Asp Cys Pro Ala Pro Gln Ala Gly Leu Ser Pro Ser Arg Arg Pro
 275 280 285
 Ala Ala Pro Met Pro Leu Pro Asn Met Leu Gly Val Gln Lys Pro Pro
 290 295 300
 Arg Gly Asp

305

<210> 2817
<211> 219
<212> DNA
<213> Homo sapiens

<400> 2817
nntggctttt ctgtctctct ctcttttttt cttgtagatc acgagctgct caggcaagag
60
ctgaacacgc ggtttctggt gcagagcgcc gagcggcctg gcgcctccct gggcccgggg
120
gttctgctgc gggcggagtt ccatcagcac cagcacacac accagcacac gcaccaacac
180
acacaccagc accaacacac attcgccccc ttcacgcgt
219

<210> 2818
<211> 73
<212> PRT
<213> Homo sapiens

<400> 2818
Xaa Gly Phe Ser Val Ser Leu Ser Phe Phe Leu Val Asp His Glu Leu
1 5 10 15
Leu Arg Gln Glu Leu Asn Thr Arg Phe Leu Val Gln Ser Ala Glu Arg
20 25 30
Pro Gly Ala Ser Leu Gly Pro Gly Val Leu Leu Arg Ala Glu Phe His
35 40 45
Gln His Gln His Thr His Gln His Thr His Gln His Thr His Gln His
50 55 60
Gln His Thr Phe Ala Pro Phe Thr Arg
65 70

<210> 2819
<211> 730
<212> DNA
<213> Homo sapiens

<400> 2819
ncgaccgccg tgccccagat caacatcact atcttgaaag gggagaaggg tgaccgcgga
60
gatcgaggcc tccaagggaa atatggcaaa acaggctcag cagggggccag gggccacact
120
ggacccaaag ggcagaaggg ctccatgggg gccctgggg agcgggtgcaa gagccactac
180
gccgcctttt cgggtgggccg ggaagcccat gcacagcaac cactactacc agacgtgatc
240
ttcgacacgg agttcgtgaa cctctacgac cacttcaaca tggtcaccgg caagttctac
300
tgctacgtgc cgggcctcta cttcttcagc ctcaacgtgc acacctggaa ccagaaggag
360
acctacctgc acatcatgaa gaacgaggag gaggtggtga tcttgttcgc gcaggtgggc
420

gaccgcagca tcatgcaaag ccagagcctg atgctggagc tgcgagagca ggaccaggtg
480
tgggtacgcc tctacaaggg cgaacgtgag aacgccatct tcagcgagga gctggacacc
540
tacatcacct tcagtggcta cctgggtcaag cagccaccg agccctagct ggccggccac
600
ctccttttct ctcgccacct tccaccctg cgctgtgctg accccaccgc ctcttccccg
660
atccctggac tccgactccc tggctttggc attcagttag acgccctgca cacacagaaa
720
gccaaagcga
730

<210> 2820
<211> 195
<212> PRT
<213> Homo sapiens

<400> 2820
Xaa Thr Ala Val Pro Gln Ile Asn Ile Thr Ile Leu Lys Gly Glu Lys
1 5 10 15
Gly Asp Arg Gly Asp Arg Gly Leu Gln Gly Lys Tyr Gly Lys Thr Gly
20 25 30
Ser Ala Gly Ala Arg Gly His Thr Gly Pro Lys Gly Gln Lys Gly Ser
35 40 45
Met Gly Ala Pro Gly Glu Arg Cys Lys Ser His Tyr Ala Ala Phe Ser
50 55 60
Val Gly Arg Glu Ala His Ala Gln Gln Pro Leu Leu Pro Asp Val Ile
65 70 75 80
Phe Asp Thr Glu Phe Val Asn Leu Tyr Asp His Phe Asn Met Phe Thr
85 90 95
Gly Lys Phe Tyr Cys Tyr Val Pro Gly Leu Tyr Phe Phe Ser Leu Asn
100 105 110
Val His Thr Trp Asn Gln Lys Glu Thr Tyr Leu His Ile Met Lys Asn
115 120 125
Glu Glu Glu Val Val Ile Leu Phe Ala Gln Val Gly Asp Arg Ser Ile
130 135 140
Met Gln Ser Gln Ser Leu Met Leu Glu Leu Arg Glu Gln Asp Gln Val
145 150 155 160
Trp Val Arg Leu Tyr Lys Gly Glu Arg Glu Asn Ala Ile Phe Ser Glu
165 170 175
Glu Leu Asp Thr Tyr Ile Thr Phe Ser Gly Tyr Leu Val Lys His Ala
180 185 190
Thr Glu Pro
195

<210> 2821
<211> 1746
<212> DNA
<213> Homo sapiens

<400> 2821
nnagactgca gttcctcgct tacctgtgca gtctaatttt gagctgcctc tttgtagtct
60

taaaaggcag gagcttcgtg ttgtgggtct gctaaccctg acgtttccgt gggcaagtgc
120
tgtgtactcc tcgccatggc acaactccaa acacgtttct acactgataa caagaaatat
180
gcagtagatg atgttccttt ctcaatccct gccacctcag aagttgctga ccttagtaat
240
attatcaata aattgctgga gacaaaaaat gagctccaca aacatgtgga gtttgatttc
300
ctcatcaagg gccagtttct tcgaatgccc ttggacaaac acatggaaat ggaagacatc
360
tcatacagaag aagttgtgga aatagaatac gtggagaagt atactgcacc ccagccagag
420
caatgcatgt tccatgatga ctggatcagt tcaattaaag gggcagagga atggatcttg
480
actggttctt atggttaagac ttctcggatc tggctccttg aaggaaagtc aataatgaca
540
attgtgggac atacggatgt tgtaaaagat gtggcctggg tgaaaaaaga tagtttgtcc
600
tgcttattan ttgagtgtct ctatggatca gactattctc ttatgggagt ggaatgtaga
660
gagaaacaaa gtgaaagccc tacactgctg nntagaggct atgctggaag ttagattctt
720
atagctgttg atggctcagg aactaaattt tgcagtggct cctgggataa gatgctaaag
780
atctggtcta cagtccttac agatgaagaa gatgaaatgg aggagtccac aaatcgacca
840
agaaagaaac agaagacaga acagttggga ctaacaagga ctcccatagt gaccctctct
900
ggccacatgg aggcagtttc ctcatgtctg tggctcagatg ctgaagaaat ctgcagtgc
960
tcttgggacc atacaattag agtgtgggat gttgagtctg gcagtcttaa gtcaactttg
1020
acaggaaata aagtgtttta ttgtatttcc tattctccac tttgtaaacg ttagcatct
1080
ggaagcacag ataggcatat cagactgtgg gatccccgaa ctaaagatgg ttctttggtg
1140
tcgctgtccc taacgtcaca tactgggttg gtgacatcag taaaatggct tcctacccat
1200
gaacagcagc tgatttcagg atcttttagat aacattgtta agctgtggga tacaagaagt
1260
tgtaaggctc ctctctatga tctggctgct catgaagaca aagttctgag ttagactgg
1320
acagacacag ggctacttct gagtggagga gcagacaata aattgtattc ctacagatat
1380
tcacctacca ctcccatgt tggggcatga aagtgaacaa taatttgact atagagatta
1440
tttctgtaaa tgaaattggt agagaacat gaaattacat agatgcagat gcagaaagca
1500
gccttttgaa gtttatataa tgttttcacc cttcataaca gctaacgtat cactttttct
1560
tattttgtat ttataataag ataggttggt tttataaaat acaaactgtg gcatacatc
1620
tctatacaaa cttgaaatta aactgagttt tacatttctc tttaaaggta ttggtttgaa
1680

ttcagatttg ctttttttatt tttatttggt ttttttttga gatggagtat tgctctgttg
 1740
 cctagg
 1746

<210> 2822
 <211> 424
 <212> PRT
 <213> Homo sapiens

<400> 2822
 Met Ala Gln Leu Gln Thr Arg Phe Tyr Thr Asp Asn Lys Lys Tyr Ala
 1 5 10 15
 Val Asp Asp Val Pro Phe Ser Ile Pro Ala Thr Ser Glu Val Ala Asp
 20 25 30
 Leu Ser Asn Ile Ile Asn Lys Leu Leu Glu Thr Lys Asn Glu Leu His
 35 40 45
 Lys His Val Glu Phe Asp Phe Leu Ile Lys Gly Gln Phe Leu Arg Met
 50 55 60
 Pro Leu Asp Lys His Met Glu Met Glu Asp Ile Ser Ser Glu Glu Val
 65 70 75 80
 Val Glu Ile Glu Tyr Val Glu Lys Tyr Thr Ala Pro Gln Pro Glu Gln
 85 90 95
 Cys Met Phe His Asp Asp Trp Ile Ser Ser Ile Lys Gly Ala Glu Glu
 100 105 110
 Trp Ile Leu Thr Gly Ser Tyr Gly Lys Thr Ser Arg Ile Trp Ser Leu
 115 120 125
 Glu Gly Lys Ser Ile Met Thr Ile Val Gly His Thr Asp Val Val Lys
 130 135 140
 Asp Val Ala Trp Val Lys Lys Asp Ser Leu Ser Cys Leu Leu Xaa Glu
 145 150 155 160
 Cys Phe Tyr Gly Ser Asp Tyr Ser Leu Met Gly Val Glu Cys Arg Glu
 165 170 175
 Lys Gln Ser Glu Ser Pro Thr Leu Leu Xaa Arg Gly His Ala Gly Ser
 180 185 190
 Val Asp Ser Ile Ala Val Asp Gly Ser Gly Thr Lys Phe Cys Ser Gly
 195 200 205
 Ser Trp Asp Lys Met Leu Lys Ile Trp Ser Thr Val Pro Thr Asp Glu
 210 215 220
 Glu Asp Glu Met Glu Glu Ser Thr Asn Arg Pro Arg Lys Lys Gln Lys
 225 230 235 240
 Thr Glu Gln Leu Gly Leu Thr Arg Thr Pro Ile Val Thr Leu Ser Gly
 245 250 255
 His Met Glu Ala Val Ser Ser Val Leu Trp Ser Asp Ala Glu Glu Ile
 260 265 270
 Cys Ser Ala Ser Trp Asp His Thr Ile Arg Val Trp Asp Val Glu Ser
 275 280 285
 Gly Ser Leu Lys Ser Thr Leu Thr Gly Asn Lys Val Phe Asn Cys Ile
 290 295 300
 Ser Tyr Ser Pro Leu Cys Lys Arg Leu Ala Ser Gly Ser Thr Asp Arg
 305 310 315 320
 His Ile Arg Leu Trp Asp Pro Arg Thr Lys Asp Gly Ser Leu Val Ser
 325 330 335
 Leu Ser Leu Thr Ser His Thr Gly Trp Val Thr Ser Val Lys Trp Ser

```

          340          345          350
Pro Thr His Glu Gln Gln Leu Ile Ser Gly Ser Leu Asp Asn Ile Val
          355          360          365
Lys Leu Trp Asp Thr Arg Ser Cys Lys Ala Pro Leu Tyr Asp Leu Ala
          370          375          380
Ala His Glu Asp Lys Val Leu Ser Val Asp Trp Thr Asp Thr Gly Leu
385          390          395          400
Leu Leu Ser Gly Gly Ala Asp Asn Lys Leu Tyr Ser Tyr Arg Tyr Ser
          405          410          415
Pro Thr Thr Ser His Val Gly Ala
          420

```

<210> 2823

<211> 461

<212> DNA

<213> Homo sapiens

<400> 2823

```

cggccgcagc cttcccccttt actcctgggt gacaccatga actgctccca cgttcacccc
60
gttgtgtctg tcagtggggg aagggggcgg aaccctcatg ctgggggttcg ggtggacgtg
120
ggtgggtggt gaccctgtt gggaggcaga cacagtcaca ggcgtcgccc ttgggaaggg
180
cagccggaga agctggccct gtgtgggcct gggcctgtag ggtttcccag tggttttgcg
240
gagccagaga gctggatggc acctggtcca gccaaagcaa gcccagaggg caggggctgg
300
atggggacac gcacatgtcc cttggccacg acaaaatggc agtgatgctg cttgccttcc
360
tgcagcatct gtgaggatca aatgcgtgca cctacgcaa gcatccgcac atagcaagtg
420
ctcacctagc acaggagccc cgtgctcctc ccaagtctca g
461

```

<210> 2824

<211> 81

<212> PRT

<213> Homo sapiens

<400> 2824

```

Met Cys Val Ser Pro Ser Ser Pro Cys Pro Arg Gly Phe Ala Trp Leu
1          5          10          15
Asp Gln Val Pro Ser Ser Ser Leu Ala Pro Gln Ser His Trp Glu Thr
          20          25          30
Leu Gln Ala Gln Ala His Thr Gly Pro Ala Ser Pro Ala Ala Leu Pro
          35          40          45
Lys Gly Asp Ala Cys Asp Cys Val Cys Leu Pro Thr Gly Val Thr Thr
          50          55          60
His Pro Arg Pro Pro Glu Pro Gln His Glu Gly Ser Ala Pro Phe Pro
65          70          75          80
His

```

<210> 2825
<211> 1520
<212> DNA
<213> Homo sapiens

<400> 2825
tgtctaacac ttgcttgcta caaaggccat ttggatatgg ttcgctttct acttgaagct
60
ggtgcagatc aagagcacia aacagatgag atgcacactg ccttaatgga ggccctgcatg
120
gatggacatg tagaggtggc acgtttgctt ttggatagtg gtgctcaagt gaacatgcct
180
gcagattcat ttgaatctcc attgacgcta gctgcctgtg gaggacatgt tgaattggca
240
gctctactta ttgaaagggg agcaaactct gaagaagtta atgatgaagg atacactccc
300
ttgatggaag cagctcgaga aggacatgaa gaaatgggtg cattacttct tagcacaagg
360
agcnaaatat caatgcacag acagaagaaa ctcaagaaac tgctcttgac tctggcttgc
420
tgtggaggct ttctggaagt ggcagacttt ctaattaagg caggagccga tatagaacta
480
gggtgttcta cccctttaat ggaagctgct caagaggggc atttggagtt agttaataac
540
ttattagctg caggagctaa cgttcacgca acaacagcaa caggggatac agcactaaca
600
tatgcctgtg aaaatgggtca tactgatgta gcagatgtct tacttcaggc aggcgcagat
660
ttagacaagc aggaggacat gaagactatt ttggagggca tagatccggc caagcatctg
720
gaacatgaat ctgaaggtgg aagaactcct ttaatgaaag ctgcaagagc tggatcatgtt
780
tgtactgttc agttcttaat tagtaaagga gcgaatgtga atagaaccac agctaataat
840
gaccatactg tactgtccct ggcttgtgca gggggtcac tggcagtggt ggaactactt
900
ttggctcatg gggcagatcc tactcaccgt ttgaaagatg gctcaactat gttgatagaa
960
gcagcaaaag gtggccatac aagtgttgtt tgctatctct tggattatcc taataacttg
1020
ctttcagccc ctccaccaga tgtcactcag ttaactcccc catccacga tttaaataag
1080
gctcctcgtg taccagttca agcactgccc atgggtgttc cacctcagga gcctgacaaa
1140
ccacctgcca atgttgccac cactcttccc atcaggaata aagctgcttc taaacaaaag
1200
tccagcagcc atttgccagc aaacagccag gatgtacagg gttacatcac caatcagtct
1260
ccagagagca ttgtagaaga ggctcaggga aagttaacag aactggaaca gaggataaaa
1320
gaagccatag aaaagaatgc acagctgcag tccttggaac tggctcatgc tgaccaactt
1380
accaaggaga agatcgagga gctcaacaaa acaagggagg aacaaattca gaagaaacaa
1440

aagatttttg aggaactaca gaaagtagaa cgagaggttac aactgaaaac tcagcagcag
 1500
 ctaaaaaaagc agtatctaga
 1520

<210> 2826
 <211> 506
 <212> PRT
 <213> Homo sapiens

<400> 2826
 Cys Leu Thr Leu Ala Cys Tyr Lys Gly His Leu Asp Met Val Arg Phe
 1 5 10 15
 Leu Leu Glu Ala Gly Ala Asp Gln Glu His Lys Thr Asp Glu Met His
 20 25 30
 Thr Ala Leu Met Glu Ala Cys Met Asp Gly His Val Glu Val Ala Arg
 35 40 45
 Leu Leu Leu Asp Ser Gly Ala Gln Val Asn Met Pro Ala Asp Ser Phe
 50 55 60
 Glu Ser Pro Leu Thr Leu Ala Ala Cys Gly Gly His Val Glu Leu Ala
 65 70 75 80
 Ala Leu Leu Ile Glu Arg Gly Ala Asn Leu Glu Glu Val Asn Asp Glu
 85 90 95
 Gly Tyr Thr Pro Leu Met Glu Ala Ala Arg Glu Gly His Glu Glu Met
 100 105 110
 Val Ala Leu Leu Ser Thr Arg Ser Xaa Ile Ser Met His Arg Gln
 115 120 125
 Lys Lys Leu Lys Lys Leu Leu Thr Leu Ala Cys Cys Gly Gly Phe
 130 135 140
 Leu Glu Val Ala Asp Phe Leu Ile Lys Ala Gly Ala Asp Ile Glu Leu
 145 150 155 160
 Gly Cys Ser Thr Pro Leu Met Glu Ala Ala Gln Glu Gly His Leu Glu
 165 170 175
 Leu Val Lys Tyr Leu Leu Ala Ala Gly Ala Asn Val His Ala Thr Thr
 180 185 190
 Ala Thr Gly Asp Thr Ala Leu Thr Tyr Ala Cys Glu Asn Gly His Thr
 195 200 205
 Asp Val Ala Asp Val Leu Leu Gln Ala Gly Ala Asp Leu Asp Lys Gln
 210 215 220
 Glu Asp Met Lys Thr Ile Leu Glu Gly Ile Asp Pro Ala Lys His Leu
 225 230 235 240
 Glu His Glu Ser Glu Gly Gly Arg Thr Pro Leu Met Lys Ala Ala Arg
 245 250 255
 Ala Gly His Val Cys Thr Val Gln Phe Leu Ile Ser Lys Gly Ala Asn
 260 265 270
 Val Asn Arg Thr Thr Ala Asn Asn Asp His Thr Val Leu Ser Leu Ala
 275 280 285
 Cys Ala Gly Gly His Leu Ala Val Val Glu Leu Leu Leu Ala His Gly
 290 295 300
 Ala Asp Pro Thr His Arg Leu Lys Asp Gly Ser Thr Met Leu Ile Glu
 305 310 315 320
 Ala Ala Lys Gly Gly His Thr Ser Val Val Cys Tyr Leu Leu Asp Tyr
 325 330 335
 Pro Asn Asn Leu Leu Ser Ala Pro Pro Pro Asp Val Thr Gln Leu Thr

340 345 350
 Pro Pro Ser His Asp Leu Asn Arg Ala Pro Arg Val Pro Val Gln Ala
 355 360 365
 Leu Pro Met Val Val Pro Pro Gln Glu Pro Asp Lys Pro Pro Ala Asn
 370 375 380
 Val Ala Thr Thr Leu Pro Ile Arg Asn Lys Ala Ala Ser Lys Gln Lys
 385 390 395 400
 Ser Ser Ser His Leu Pro Ala Asn Ser Gln Asp Val Gln Gly Tyr Ile
 405 410 415
 Thr Asn Gln Ser Pro Glu Ser Ile Val Glu Glu Ala Gln Gly Lys Leu
 420 425 430
 Thr Glu Leu Glu Gln Arg Ile Lys Glu Ala Ile Glu Lys Asn Ala Gln
 435 440 445
 Leu Gln Ser Leu Glu Leu Ala His Ala Asp Gln Leu Thr Lys Glu Lys
 450 455 460
 Ile Glu Glu Leu Asn Lys Thr Arg Glu Glu Gln Ile Gln Lys Lys Gln
 465 470 475 480
 Lys Ile Leu Glu Glu Leu Gln Lys Val Glu Arg Glu Leu Gln Leu Lys
 485 490 495
 Thr Gln Gln Gln Leu Lys Lys Gln Tyr Leu
 500 505

<210> 2827

<211> 481

<212> DNA

<213> Homo sapiens

<400> 2827

cgggaggcag ctgctgccgc aggagatgct tcagaggatt cggacgcagg gtccagggcg
 60
 ctgcctttcc tgggcggcaa ccggctgagc ttggacctgt accccggggg ctgccagcag
 120
 ctgctgcacc tgtgtgtcca gcagcctctt cagctgctgc aggtggaatt cttgcgtctg
 180
 aacactcacg aagaccctca actgctggag gccaccctgg ccagctgcc tcaaaacctg
 240
 tctgcctcc gctccctggc cctcaaaaga gggcaacgcc gggacacact gggtgctctg
 300
 ctccgggggtg ccctgaccaa cctgcccgtt ggtctgagtg gcctggccca tctggccac
 360
 ctggacctga gcttcaacag cctggagaca ctgccggcct gtgtcctgca gatgcgaggt
 420
 ctgggtgctg tcttgctgtc tcacaactgc ctctctgagc tgctgaggc tctgggggac
 480
 c
 481

<210> 2828

<211> 160

<212> PRT

<213> Homo sapiens

<400> 2828

Arg Glu Ala Ala Ala Ala Ala Gly Asp Ala Ser Glu Asp Ser Asp Ala

1	5	10	15
Gly Ser Arg Ala Leu Pro Phe Leu Gly Gly Asn Arg Leu Ser Leu Asp			
	20	25	30
Leu Tyr Pro Gly Gly Cys Gln Gln Leu Leu His Leu Cys Val Gln Gln			
	35	40	45
Pro Leu Gln Leu Leu Gln Val Glu Phe Leu Arg Leu Asn Thr His Glu			
	50	55	60
Asp Pro Gln Leu Leu Glu Ala Thr Leu Ala Gln Leu Pro Gln Asn Leu			
65	70	75	80
Ser Cys Leu Arg Ser Leu Val Leu Lys Arg Gly Gln Arg Arg Asp Thr			
	85	90	95
Leu Gly Ala Cys Leu Arg Gly Ala Leu Thr Asn Leu Pro Ala Gly Leu			
	100	105	110
Ser Gly Leu Ala His Leu Ala His Leu Asp Leu Ser Phe Asn Ser Leu			
	115	120	125
Glu Thr Leu Pro Ala Cys Val Leu Gln Met Arg Gly Leu Gly Ala Leu			
	130	135	140
Leu Leu Ser His Asn Cys Leu Ser Glu Leu Pro Glu Ala Leu Gly Ala			
145	150	155	160

<210> 2829

<211> 3648

<212> DNA

<213> Homo sapiens

<400> 2829

```

nntttttttt tttttttttt aatgtagcaa ttatatattt .cgtcaattag aggtttgctc
60
tctaaaagca gatacttttc atttttaaagt acataggata attctcaaga agtatttgct
120
gcagtactgg tggttatggc taaaaataga gcaatagtga aaataaaaat aagtgcctac
180
tctaaaacca ggaagatgca cagtgaaaac tttgaaaaat tattttgcca tgaaataatt
240
ttctaagcgt tttccttggg atattgattt tattgtatcg attgtattat attgtatggg
300
attagattag attagattgg attggattta tagcaccag gctacctcct tgagaaacag
360
caacttacct agcaaatcca cttttttcgc ctttaagaat acgttttcat tgaattccta
420
tttgtccaaa gatactaagt atgcccgggtg gacctaaagag acaaaccxaa attagggaaa
480
gtaagctcag atggaaagag acctttggga tttcatttta ttatgtttta tatatgtttt
540
aatacctttt cacagattta aatccccagg gtgaatactc ctttctttgt tagtacctgg
600
cgtgtgttca gtagtcaaag taattaaaat tagcacctat ataatgagct tgtcattttt
660
aatgttcttt accaaccaga atcctaata agtctaaaag gtttaggctg ggcacgttgg
720
ctcacgcctg caatcccagc ccaagaagtt cttttggcca agacgcacac acacacacca
780ttctattttc ttccagtgtg acgacaacca caagctgtca gcacttcact      840
atttgctgtc ccctcagcgg gatcgggatg cagctacgca gcggggccct ggcgagccgc
900

```

ggtgtcaggg cccttttctc ctcttccac cgtgggaagc gaattcagtg gcgtcaaggg
960
ccaagagcca gacctgagtt tgtctctcac ccccgatgc tcgtctccct tttctcactg
1020
ccttccgccc cctctgatct cgacttctcg caacctatcc aggtcctctc tgggcctctg
1080
ccctgagtcg gccccgaatc agacgggctt gactcgctga aagaattccc ctctgagagg
1140
aggcagattc ccctctacat agacgacacc ctgacgatgg tgatggaatt tcttgataat
1200
gtgttaaate tcgatggaca tcagaataat ggtgcacagc taaagcagtt cattcagcga
1260
catggtatgc ttaagcaaca ggatctaagt attgccatgg tggtgacatc acgcaagtc
1320
ctgagtgcac tttctcagct tgtcccatgt gttggttgtc gtcgcagtggt ggagcgtctc
1380
ttttcccagc ttgtagagtc tggaaatcct gctcttgaac cctaacagt agggcccaag
1440
ggagtccctgt ctgtaactag aagctgcatg actgatgcaa agaagcttta tacattatct
1500
tatgtacatg ggtccaaact aaatgacatg atagatgcta ttccaaaaag taagaagaat
1560
aagagatgtc agttgcactc cttagatacg cacaagccaa aacctttggg aggttgttgg
1620
atggatgtat gggaaactaat gtcgcaggaa tgcagggatg aagtagtttt aattgactcg
1680
agttgtcttt tagaaacact agaaacatat ctgcgaaaac acaggttttg cactgattgc
1740
aaaaataaag tcttccgagc atacaatate cttattgggtg aacttgactg cagcaaagaa
1800
aagggtact gtgctgcact ttatgaaggc ttgcgggtgct gtccacatga acgacacata
1860
catgtttgct gtgaaacaga cttcattgca catcttttgg gtcgtgctga gccagagttc
1920
gcaggagggt atgagcgaag agaaaggcat gcaaagacaa tagatatagc tcaagaagaa
1980
gttctgacct gcttgggaat tcatctttat gaaagactgc atcgaatctg gcagaagcta
2040
cgggcagaag agcagacatg gcagatgctt ttctatcttg gtgttgatgc tttacgcaag
2100
agttttgaga tgaccgtgga aaaagtacag ggtattagca gattggaaca actttgtgag
2160
gaattttcag aagaggaacg agtaagagaa ctcaagcaag aaaagaaacg ccaaaaacgg
2220
aagaatagac gaaaaaataa gtgtgtgtgt gatattccta ctcccttaca aacagcagat
2280
gaaaaggaag taagccaaga gaaggaaaca gacttcatag aaaatagcag ctgcaaagcc
2340
tgtggcagca ctgaagatgg taatacttgt gtagaagtaa ttgttaccaa tgaaaatata
2400
tcatgtacct gtcctagcag tggcaatctt ttgggggtccc ctaaaataaa gaaaggctta
2460
tctccacact gtaatggtag tgattgtgga tattcatcta gcatggaagg gagtgaacaa
2520

gggtctcggg aggggttcgga tgttgccctgc actgaaggca tttgtaatca tgatgaacac
 2580
 ggtgatgact cttgtgttca tcaactgtgaa gacaaagagg atgatggtga tagttgtgtt
 2640
 gaatgttggg caaattctga agagaacgac acaaaaggaa aaaataaaaa gaagaagaag
 2700
 aaaagcaaga tactgaaatg tgatgaacat atccagaagc ttggaagctg tattacagat
 2760
 ccaggtaatc gagagacctc aggaaatacc atgcacacag tgtttcaccg tgacaagacc
 2820
 aaagatacac atcctgaaag ctggtgcagc tctgaaaagg gtgggcagcc attgccttgg
 2880
 tttgagcata ggaaaaatgt accacagttt gcagaacctc cagaaacggt gtttgggtccc
 2940
 gattccggaa aagggtgcaa gagcttagtt gaactccttg atgagtctga atgtacttca
 3000
 gatgaggaaa tctttatctc acaagatgaa atacagtcac ttatggctaa taaccagtct
 3060
 ttctacagca atagagaaca ataccgacag catctgaagg agaaatttaa taaatactgc
 3120
 cggttaaatg atcacaagag gcccatcttg agtggtctgg tgacaacggc tggagcaaat
 3180
 taaataaata aaatagctct gtctttcaat gaaacactca cgatgactac tgcgccttct
 3240
 ctttcgaaaa actcttaatt tagtgactta tggcaaaatt ttatcttaaa tcaatgtgat
 3300
 tctttcttgt tttgggagac ggtggaggta tcttcattag ttctttcttc aggcttgtgt
 3360
 ctttagttgc gtggctgcgc aggcctgcca tatgatttaa gccatctctt ttcattaaat
 3420
 gtttctcttc ctgtgagact tactaaagca acttagtggc aaaaagtaat gttgtactta
 3480
 taattctgta cagaaatgac aatgagctga atatatgggt ttacaaagta gacatccact
 3540
 tgcaaaatgt ttggatgtaa tgttaaagcg caatgtgcaa aatttaaaat aaagaatatt
 3600
 tattaatacg cacaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaa
 3648

<210> 2830

<211> 668

<212> PRT

<213> Homo sapiens

<400> 2830

Met	Val	Met	Glu	Phe	Pro	Asp	Asn	Val	Leu	Asn	Leu	Asp	Gly	His	Gln
1				5					10					15	
Asn	Asn	Gly	Ala	Gln	Leu	Lys	Gln	Phe	Ile	Gln	Arg	His	Gly	Met	Leu
			20					25					30		
Lys	Gln	Gln	Asp	Leu	Ser	Ile	Ala	Met	Val	Val	Thr	Ser	Arg	Glu	Val
			35				40					45			
Leu	Ser	Ala	Leu	Ser	Gln	Leu	Val	Pro	Cys	Val	Gly	Cys	Arg	Arg	Ser
		50				55					60				
Val	Glu	Arg	Leu	Phe	Ser	Gln	Leu	Val	Glu	Ser	Gly	Asn	Pro	Ala	Leu

65 70 75 80
 Glu Pro Leu Thr Val Gly Pro Lys Gly Val Leu Ser Val Thr Arg Ser
 85 90 95
 Cys Met Thr Asp Ala Lys Lys Leu Tyr Thr Leu Phe Tyr Val His Gly
 100 105 110
 Ser Lys Leu Asn Asp Met Ile Asp Ala Ile Pro Lys Ser Lys Lys Asn
 115 120 125
 Lys Arg Cys Gln Leu His Ser Leu Asp Thr His Lys Pro Lys Pro Leu
 130 135 140
 Gly Gly Cys Trp Met Asp Val Trp Glu Leu Met Ser Gln Glu Cys Arg
 145 150 155 160
 Asp Glu Val Val Leu Ile Asp Ser Ser Cys Leu Leu Glu Thr Leu Glu
 165 170 175
 Thr Tyr Leu Arg Lys His Arg Phe Cys Thr Asp Cys Lys Asn Lys Val
 180 185 190
 Leu Arg Ala Tyr Asn Ile Leu Ile Gly Glu Leu Asp Cys Ser Lys Glu
 195 200 205
 Lys Gly Tyr Cys Ala Ala Leu Tyr Glu Gly Leu Arg Cys Cys Pro His
 210 215 220
 Glu Arg His Ile His Val Cys Cys Glu Thr Asp Phe Ile Ala His Leu
 225 230 235 240
 Leu Gly Arg Ala Glu Pro Glu Phe Ala Gly Gly Tyr Glu Arg Arg Glu
 245 250 255
 Arg His Ala Lys Thr Ile Asp Ile Ala Gln Glu Glu Val Leu Thr Cys
 260 265 270
 Leu Gly Ile His Leu Tyr Glu Arg Leu His Arg Ile Trp Gln Lys Leu
 275 280 285
 Arg Ala Glu Glu Gln Thr Trp Gln Met Leu Phe Tyr Leu Gly Val Asp
 290 295 300
 Ala Leu Arg Lys Ser Phe Glu Met Thr Val Glu Lys Val Gln Gly Ile
 305 310 315 320
 Ser Arg Leu Glu Gln Leu Cys Glu Glu Phe Ser Glu Glu Glu Arg Val
 325 330 335
 Arg Glu Leu Lys Gln Glu Lys Lys Arg Gln Lys Arg Lys Asn Arg Arg
 340 345 350
 Lys Asn Lys Cys Val Cys Asp Ile Pro Thr Pro Leu Gln Thr Ala Asp
 355 360 365
 Glu Lys Glu Val Ser Gln Glu Lys Glu Thr Asp Phe Ile Glu Asn Ser
 370 375 380
 Ser Cys Lys Ala Cys Gly Ser Thr Glu Asp Gly Asn Thr Cys Val Glu
 385 390 395 400
 Val Ile Val Thr Asn Glu Asn Thr Ser Cys Thr Cys Pro Ser Ser Gly
 405 410 415
 Asn Leu Leu Gly Ser Pro Lys Ile Lys Lys Gly Leu Ser Pro His Cys
 420 425 430
 Asn Gly Ser Asp Cys Gly Tyr Ser Ser Ser Met Glu Gly Ser Glu Thr
 435 440 445
 Gly Ser Arg Glu Gly Ser Asp Val Ala Cys Thr Glu Gly Ile Cys Asn
 450 455 460
 His Asp Glu His Gly Asp Asp Ser Cys Val His His Cys Glu Asp Lys
 465 470 475 480
 Glu Asp Asp Gly Asp Ser Cys Val Glu Cys Trp Ala Asn Ser Glu Glu
 485 490 495
 Asn Asp Thr Lys Gly Lys Asn Lys Lys Lys Lys Lys Ser Lys Ile

```
<210> 2831
<211> 3986
<212> DNA
<213> Homo sapiens
```

```

<400> 2831
nnctcctgcc tcaacctccc aaattgctag ttggcccggt gccttcagtg gcctttgtgt
60
ctgggtgaga ggaaccctgg atggccactc tgccctgagt gtgtgggtcc ccagaagtgc
120
tgggttaggg ggcacggagg gccagaaagt cccctttgga gcgctggact ctctcgctga
180
ctcctacccc accccggcct ggggtttcag agaaggggtc caggcaggag tgtcatcttt
240
tctcaatggg gatgtggctt cagtctctgt ccaggaggca cgcgacctc cagtggccgg
300
ctccggaggc ttggtgactc cagtggccca gccttgaaaa gatcttttga ggtcgaggag
360
gtcgagacac ccaactccac cccaccccggt aggggtccaga ctcccctact ccgagccact
420
gtggccagct ccaccagaa attccaggac ctgggctgta agaactcaga accctcggcc
480
cgccatgtgg actccctaag ccaacgctcc cccaaggcgt ccctgcggag ggtggagctc
540
tcggggcccca aggcggccga gccgggtgtcc cggcgcactg agctgtccat tgacatctcg
600
tccaagcagg tggagaacgc cggggccatc ggcccgtccc ggttcgggct caagagggcc
660
gaggtgttgg gccacaagac gccagaaccg gccctcggga ggacggagat caccatcgtc
720
aaaccccgag agtcagccca ccggaggatg gagccccctg cctccaagggt ccccgagggt
780

```

cccactgccc ctgccaccga cgcagccccc aagaggggtgg agatccagat gcccgaagcct
840
gctgaggcgc ccaccgcccc cagcccagcc cagaccttgg agaattcaga gcctgcccct
900
gtgtctcagc tgcagagcag gctggagccc aagccccagc cccctgtggc tgaggctaca
960
ccccggagcc aggaggccac tgaggcggct cccagctgcg ttggcgacat ggccgacacc
1020
cccagagatg cggggctcaa gcaggcgcct gcatcacgga acgagaaggc cccggtggac
1080
ttcggctacg tggggattga ctccatcctg gagcagatgc gccggaaggc catgaagcag
1140
ggcttcgagt tcaacatcat ggtggtcggg cagagcggct tgggtaaate caccttaate
1200
aacaccctct tcaaatacaa aatcagccgg aagtcgggtgc agcccacctc agaggagcgc
1260
atccccaaga ccacgcagat caagtccatc acgcacgata ttgaggagaa aggcgtccgg
1320
atgaagctga cagtgattga cacaccaggg ttcggggacc acatcaaaa cgagaactgc
1380
tggcagccca tcatgaagtt catcaatgac cagtacgaga aatacctgca ggaggaggtc
1440
aacatcaacc gcaagaagcg catcccggac acccgcgctc actgctgcct ctacttcate
1500
cccgccaccg gccactccct caggcccctg gacatcgagt ttatgaaacg cctgagcaag
1560
gtggtcaaca tcgtccctgt catcgccaag gcggacacac tcaccctgga ggagagggtc
1620
cacttcaaac agcggatcac cgcagacctg ctgtccaacg gcatcgacgt gtacccccag
1680
aaggaatttg atgaggactc ggaggaccgg ctggtgaacg agaagttccg ggagatgatc
1740
ccatttgctg tgggtgggcag tgaccacgag taccagggtca acggcaagag gatccttggg
1800
aggaagacca agtgggggtac catcgaagtt gaaaacacca cacactgtga gtttgacctc
1860
ctgcgggacc ttctcatcag gacgcacatg cagaacatca aggacatcac cagcagcatc
1920
cacttcgagg cgtaccgtgt gaagcgctc aacgagggca gcagcgccat ggccaacggc
1980
gtggaggaga aggagccaga agccccggag atgtagacgc caccctgccc acccccggga
2040
tcctgcccc aagtcatttc cgtccccccc ccaggccctc ccaccacccc attttatttt
2100
atatgatttt ctccatttgt catcgttccc cacccttcg acatgctgcc aggaacaag
2160
ggaaggggccc tccctccgag tgagtcagt atgaggccgc ggcctcccc aggttgtggg
2220
gaggctgcac tggagccaca ggcaggggtg agagcaccca ctgaattgac atgacctct
2280
gtcccaggc ctggctcccc gagggctcag aagagcagct tcggtgtgca gatcatccgt
2340
ccgtgtgggg ttctcagtgc cggaggcctt ggggtgggg ccaggcctcg cacttgacga
2400

ggagcccagt gggctgcacg ctcccctcca tcccacatcg cctgtcccc tggagtgtgt
2460
cagagcccag gggagaatgc agcccaccag gacacactgg acccctgcc cgccacatgg
2520
tgtggccatc actcagcccc taccctgcc ctgtcctaa gggtagaaaa ctccagggtc
2580
cctgccacc gactgcccag ccactccaag cccctggca gctgcccctc ctggagcaga
2640
aagtgccttt atctcagcca tccgcagact gctcgccag atgcggggac aggctggaat
2700
gagggaggcg tcttcatctc cctgccatcc ccctctcac ccacccccgc cccaccggg
2760
ctgcaggtgc tgetgatgcg ctgggatctg attgaggata aaaaggaagg agagatgacc
2820
cctacccct catccccag ttttgaaaag gtctaagcaa gtgagtctgg tggaggagct
2880
gagggaggga gccatggaag gtgccagaag gaagggtggc gggggcacgt gtgggccgtg
2940
gcttgggctg gtcagagtgg cgtgagctgc ccggcgctg cctgccccaa gtgaccaggg
3000
aagtgtgtgt gtgtccatgt gtatgcgtgt ccgtctgtct gtctagtgtc tgggtttggc
3060
ccaagactgg gctgtagtta cattaatgcc cagccagcca cccctgccac tcacccctcc
3120
tggcccaggc cttgctgact ctctgagctg gggagggtggg aggccaggcg agcctgactc
3180
tgttgatcta cccgtgcctg ggccccctcc ctacagagccc atggtaacga acccctagaa
3240
aggagagaac gggcgctcagg ggtgcacagt ccacagctga agagcaaggc ttcgtggcag
3300
cacggcccgg cccctcacc tctgtcccca cgaggggacc catgggggct gtctttgcag
3360
ggcacagatg accaaagtcc ctctctgctt cctgttacct gtcttgctcc tggggagaaa
3420
gaggggctg atgagactcc actcaggtgc acacatcacc aggtgcatct gcaggcaccg
3480
ggctggctgc ttgcagccag gagaaggctc gcgagaagga gtgtatgagt gtgagtgtgt
3540
gtgcatggaa gttggggcac tgggcgtctg actccctccc caccgaagag aggaaggacc
3600
cctcaccacc cccactggcg agacagttaa ctttgccgac ttgccatgtt tttgcaaaa
3660
ccaagatttt gaaggaaatg agtggccagc gccagggccc aggccatgtg gcctgcccag
3720
cctcaatgtc acttggtggc ggggtggggg gggggtgggc agcagcatcc cagccttgag
3780
atgcttcaat ttccttctct gtaaccagac tttgaaaaat tgttcgtttc atcaggctct
3840
gttcctcaat ggccttttgc tacgtgcctc ccgagaaatt tgtctttttg tataaatgac
3900
aaagtgttga aaatgtatct cctgaaataa atgtttcaaa tgcagaaacc caaaaaaaaa
3960
aaaaaaaaaa aaaaaaaaaa aaaaaa
3986

<210> 2832
 <211> 611
 <212> PRT
 <213> Homo sapiens

<400> 2832

```

Leu Leu Pro His Pro Gly Leu Gly Phe Gln Arg Arg Gly Pro Gly Arg
 1          5          10          15
Ser Val Ile Phe Ser Gln Trp Gly Cys Gly Phe Ser Leu Cys Pro Gly
 20          25          30
Gly Thr Arg Thr Ser Ser Gly Arg Leu Arg Arg Leu Gly Asp Ser Ser
 35          40          45
Gly Pro Ala Leu Lys Arg Ser Phe Glu Val Glu Glu Val Glu Thr Pro
 50          55          60
Asn Ser Thr Pro Pro Arg Arg Val Gln Thr Pro Leu Leu Arg Ala Thr
 65          70          75          80
Val Ala Ser Ser Thr Gln Lys Phe Gln Asp Leu Gly Val Lys Asn Ser
 85          90          95
Glu Pro Ser Ala Arg His Val Asp Ser Leu Ser Gln Arg Ser Pro Lys
 100          105          110
Ala Ser Leu Arg Arg Val Glu Leu Ser Gly Pro Lys Ala Ala Glu Pro
 115          120          125
Val Ser Arg Arg Thr Glu Leu Ser Ile Asp Ile Ser Ser Lys Gln Val
 130          135          140
Glu Asn Ala Gly Ala Ile Gly Pro Ser Arg Phe Gly Leu Lys Arg Ala
 145          150          155          160
Glu Val Leu Gly His Lys Thr Pro Glu Pro Ala Pro Arg Arg Thr Glu
 165          170          175
Ile Thr Ile Val Lys Pro Gln Glu Ser Ala His Arg Arg Met Glu Pro
 180          185          190
Pro Ala Ser Lys Val Pro Glu Val Pro Thr Ala Pro Ala Thr Asp Ala
 195          200          205
Ala Pro Lys Arg Val Glu Ile Gln Met Pro Lys Pro Ala Glu Ala Pro
 210          215          220
Thr Ala Pro Ser Pro Ala Gln Thr Leu Glu Asn Ser Glu Pro Ala Pro
 225          230          235          240
Val Ser Gln Leu Gln Ser Arg Leu Glu Pro Lys Pro Gln Pro Pro Val
 245          250          255
Ala Glu Ala Thr Pro Arg Ser Gln Glu Ala Thr Glu Ala Ala Pro Ser
 260          265          270
Cys Val Gly Asp Met Ala Asp Thr Pro Arg Asp Ala Gly Leu Lys Gln
 275          280          285
Ala Pro Ala Ser Arg Asn Glu Lys Ala Pro Val Asp Phe Gly Tyr Val
 290          295          300
Gly Ile Asp Ser Ile Leu Glu Gln Met Arg Arg Lys Ala Met Lys Gln
 305          310          315          320
Gly Phe Glu Phe Asn Ile Met Val Val Gly Gln Ser Gly Leu Gly Lys
 325          330          335
Ser Thr Leu Ile Asn Thr Leu Phe Lys Ser Lys Ile Ser Arg Lys Ser
 340          345          350
Val Gln Pro Thr Ser Glu Glu Arg Ile Pro Lys Thr Ile Glu Ile Lys
 355          360          365
Ser Ile Thr His Asp Ile Glu Glu Lys Gly Val Arg Met Lys Leu Thr

```

370		375		380
Val Ile Asp Thr Pro Gly Phe Gly Asp His Ile Asn Asn Glu Asn Cys				
385		390		395
Trp Gln Pro Ile Met Lys Phe Ile Asn Asp Gln Tyr Glu Lys Tyr Leu				400
	405		410	415
Gln Glu Glu Val Asn Ile Asn Arg Lys Lys Arg Ile Pro Asp Thr Arg				
	420		425	430
Val His Cys Cys Leu Tyr Phe Ile Pro Ala Thr Gly His Ser Leu Arg				
	435		440	445
Pro Leu Asp Ile Glu Phe Met Lys Arg Leu Ser Lys Val Val Asn Ile				
	450		455	460
Val Pro Val Ile Ala Lys Ala Asp Thr Leu Thr Leu Glu Glu Arg Val				
465		470		475
His Phe Lys Gln Arg Ile Thr Ala Asp Leu Leu Ser Asn Gly Ile Asp				480
	485		490	495
Val Tyr Pro Gln Lys Glu Phe Asp Glu Asp Ser Glu Asp Arg Leu Val				
	500		505	510
Asn Glu Lys Phe Arg Glu Met Ile Pro Phe Ala Val Val Gly Ser Asp				
	515		520	525
His Glu Tyr Gln Val Asn Gly Lys Arg Ile Leu Gly Arg Lys Thr Lys				
	530		535	540
Trp Gly Thr Ile Glu Val Glu Asn Thr Thr His Cys Glu Phe Ala Tyr				
545		550		555
Leu Arg Asp Leu Leu Ile Arg Thr His Met Gln Asn Ile Lys Asp Ile				560
	565		570	575
Thr Ser Ser Ile His Phe Glu Ala Tyr Arg Val Lys Arg Leu Asn Glu				
	580		585	590
Gly Ser Ser Ala Met Ala Asn Gly Val Glu Glu Lys Glu Pro Glu Ala				
	595		600	605
Pro Glu Met				
610				

<210> 2833

<211> 420

<212> DNA

<213> Homo sapiens

<400> 2833

nncggcagcc atgttgacg tggtcagcac aggggccggc accacgggggt tatcgaagca
60
gctgtcaaga tgctgggggtc cctggtgttg aggagaaaag cactggcgcc acggctactc
120
ctccggctgc tcaggteccc aacgctccgg ggccatggag gtgcttccgg ccggaatgtg
180
actactggga gtctcgggga gccgcagtgg ctgagggtag ccaccggggg gcgccctgga
240
acatcgccgg ccttggtctc cggacgtggg gcagccaccg gggggcgcca gggaggacgc
300
ttcgatacca aatgcctcgc ggctgccact tggggacgcc ttcttggtcc cgaagaaaca
360
ctcccaggac aggacagctg gaacgggggtc cccagcaggg ccggactggg catgtgcgcc
420

<210> 2834

<211> 117

<212> PRT

<213> Homo sapiens

<400> 2834

```

Met Leu Gly Ser Leu Val Leu Arg Arg Lys Ala Leu Ala Pro Arg Leu
 1           5           10           15
Leu Leu Arg Leu Leu Arg Ser Pro Thr Leu Arg Gly His Gly Gly Ala
      20           25           30
Ser Gly Arg Asn Val Thr Thr Gly Ser Leu Gly Glu Pro Gln Trp Leu
      35           40           45
Arg Val Ala Thr Gly Gly Arg Pro Gly Thr Ser Pro Ala Leu Phe Ser
      50           55           60
Gly Arg Gly Ala Ala Thr Gly Gly Arg Gln Gly Gly Arg Phe Asp Thr
      65           70           75           80
Lys Cys Leu Ala Ala Thr Trp Gly Arg Leu Pro Gly Pro Glu Glu
      85           90           95
Thr Leu Pro Gly Gln Asp Ser Trp Asn Gly Val Pro Ser Arg Ala Gly
      100           105           110
Leu Gly Met Cys Ala
      115

```

<210> 2835

<211> 938

<212> DNA

<213> Homo sapiens

<400> 2835

```

tttttttttt tttttttttt ttctgggtgc aagaggttta ttggggagcc atcccaggaa
60
gcccaggcgg ggggagtggg gaagagaggg aaggagagag cccgcagga agtacatgaa
120
tgagtgggtt actgctgcgg gcaactggga ctccatcctg ctgggcatcc tctgagagtt
180
tatgtagaat acacttcaga attgtcctgc tcaaggacaa tgaagctgag gtctgtctcc
240
ttattgactc agggttgctg ctcttgggga cattaacccc ccaacacttc tagcttgccc
300
agtgcactga ctgagcacac agctgtggcc accagagaac ctctttgggc tgtgatacag
360
gaaaccatcg gtgtgcatgg taactctcta gcagtgtcct tcatgccggg acatggggac
420
acgggcaggc actgctggca tctgctaacc cgggagggcc atacttcaga accggtcagc
480
tgggccaagg cctctctaag gccagcggc tctcatgggc aaatgtcagg tgacacagag
540
tcagagaccc tgagtgtgcg aggggaagat attggtgaag acctgttctc tgaggccctg
600
ggccggggcag tggggcagtg ggcggggggc aagctgctgg accatggctg tgtggagagc
660
agcattctgg attcctctgc gggctctgct cccactacg aggtgtttgt ggcgctgagg
720
gggctgagga atctgtcaga ggaaaatcga gacaagctgg accactgcct tcaggaagcc
780

```

tctccccgct acaagtcctt gcggttcttg ggcagcgtgg gccctgcaga gtccacctgg
840
tggtgtcctg agtcaagtcc tgccccaccg cccagctccc cccagaggcc acctcgcccc
900
tccctctggg acctctccgg atggggagtc cttggcca
938

<210> 2836

<211> 178

<212> PRT

<213> Homo sapiens

<400> 2836

Met	Pro	Gly	His	Gly	Asp	Thr	Gly	Arg	His	Cys	Trp	His	Leu	Leu	Thr
1				5					10					15	
Pro	Glu	Ala	His	Thr	Ser	Glu	Pro	Val	Ser	Trp	Ala	Lys	Ala	Ser	Leu
			20					25					30		
Arg	Pro	Ser	Gly	Ser	His	Gly	Gln	Met	Ser	Gly	Asp	Thr	Glu	Ser	Glu
		35					40					45			
Thr	Leu	Ser	Val	Arg	Gly	Glu	Asp	Ile	Gly	Glu	Asp	Leu	Phe	Ser	Glu
	50					55					60				
Ala	Leu	Gly	Arg	Ala	Val	Gly	Gln	Trp	Ala	Gly	Ala	Lys	Leu	Leu	Asp
65					70					75				80	
His	Gly	Cys	Val	Glu	Ser	Ser	Ile	Leu	Asp	Ser	Ser	Ala	Gly	Ser	Ala
			85						90					95	
Pro	His	Tyr	Glu	Val	Phe	Val	Ala	Leu	Arg	Gly	Leu	Arg	Asn	Leu	Ser
			100					105					110		
Glu	Glu	Asn	Arg	Asp	Lys	Leu	Asp	His	Cys	Leu	Gln	Glu	Ala	Ser	Pro
		115					120					125			
Arg	Tyr	Lys	Ser	Leu	Arg	Phe	Trp	Gly	Ser	Val	Gly	Pro	Ala	Glu	Ser
	130					135					140				
Thr	Trp	Trp	Cys	Pro	Glu	Ser	Ser	Pro	Ala	Pro	Pro	Pro	Ser	Ser	Pro
145					150					155				160	
Gln	Arg	Pro	Pro	Arg	Pro	Ser	Leu	Trp	Asp	Leu	Ser	Gly	Trp	Gly	Val
				165					170					175	

Leu Gly

<210> 2837

<211> 1250

<212> DNA

<213> Homo sapiens

<400> 2837

nnntttaccct cttctccccct tctcgaacac catgccacaa gaagagtgat ctcttccccct
60
gttttcacaa tggaggactc cggaagactc ttcagctccg aggaggaaga agctaactat
120
tggaaagatc tggcgatgac ctacaaacag agggcagaaa atacgcaaga ggaactccga
180
gaattccagg aggggaagccg agaatatgaa gctgaattgg agacgcagct gcaacaaatt
240
gaaaccagga acagagacct cctgtccgaa aataaccgcc ttcgcatgga gctggaaacc
300

atcaaggaga agtttgaagt gcagcactct gaaggctacc ggcagatctc agccttggag
 360
 gatgacctcg cgcagaccaa agccattaaa gaccaattgc agaaatacat cagagagctg
 420
 gagcaagcaa atgacgccct ggaaagagcc aagcgcgcca cgatcatgtc tctcgaagac
 480
 tttgagcagc gcttgaatca ggccatcgaa agaaatgcct tcctggaaag tgaacttgat
 540
 gaaaaagaga atctcctgga atctgttcag agactgaagg atgaagccag agatttgctg
 600
 caggaactgg ccgtgcagca gaagcaggag aaaccagga ccccatgcc cagctcagt
 660
 gaagctgaga ggacagacac agctgtgcag gccacgggct ccgtgccgtc cagccccatt
 720
 gctcaccgag gaccagctc aagtttaaac acacctggga gcttcagacg tggcctggac
 780
 gacntccacc gggggacccc cctcacacct gcggcccgga tatcagccct caacattgtg
 840
 ggagacctac tgcggaaagt cggggcactg gagtccaaac tcgcttctcg ccggaacctc
 900
 gtgtacgatc agtccccaaa ccgaacaggt ggcccagcct ctgggcggag cagcaagaac
 960
 agagatggcg gggagagacg gccaagcagc accagcgtgc ctttgggtga taaggggtca
 1020
 gtaccttcta ataaacctct cgctggcggg gagaaccgc ctgccccagg caagagacac
 1080
 tcacccccag cccacagcca tgtgtctttt taaattatag gattatttca gcaaacctta
 1140
 tcctctctc tgcctcctgc aggcagcatt aggtggtgtc ttgtggcttg aacaaagggc
 1200
 tagagagagg gtcttgtttt gtgagacagg gtctcgctct gtcacctagg
 1250

<210> 2838

<211> 370

<212> PRT

<213> Homo sapiens

<400> 2838

Xaa	Leu	Pro	Ser	Ser	Pro	Leu	Leu	Glu	His	His	Ala	Thr	Arg	Arg	Val
1				5					10					15	
Ile	Ser	Ser	Pro	Val	Phe	Thr	Met	Glu	Asp	Ser	Gly	Lys	Thr	Phe	Ser
			20					25					30		
Ser	Glu	Glu	Glu	Glu	Ala	Asn	Tyr	Trp	Lys	Asp	Leu	Ala	Met	Thr	Tyr
		35				40					45				
Lys	Gln	Arg	Ala	Glu	Asn	Thr	Gln	Glu	Glu	Leu	Arg	Glu	Phe	Gln	Glu
		50			55					60					
Gly	Ser	Arg	Glu	Tyr	Glu	Ala	Glu	Leu	Glu	Thr	Gln	Leu	Gln	Gln	Ile
65					70				75					80	
Glu	Thr	Arg	Asn	Arg	Asp	Leu	Leu	Ser	Glu	Asn	Asn	Arg	Leu	Arg	Met
			85					90					95		
Glu	Leu	Glu	Thr	Ile	Lys	Glu	Lys	Phe	Glu	Val	Gln	His	Ser	Glu	Gly
		100				105						110			
Tyr	Arg	Gln	Ile	Ser	Ala	Leu	Glu	Asp	Asp	Leu	Ala	Gln	Thr	Lys	Ala

```
<210> 2839
<211> 606
<212> DNA
<213> Homo sapiens
```

2073

gcgtcagagg aaactaacac caaagaggca tcgcaatact tcatcctgct gatcctgaca
 480
 gatggtgtta tcacagacat gggcgacacc cgggaggcca ttgtccatgc ctcccacctc
 540
 cccatgtcag tcatcatcgt gggagtaggg aacgctgact tcagtgcacat gcagatgctg
 600
 gacggt
 606

<210> 2840
 <211> 202
 <212> PRT
 <213> Homo sapiens

<400> 2840
 Ile Leu Asn Leu Cys Lys Ile His Lys Met His Ser Phe Leu Asp Tyr
 1 5 10 15
 Ile Met Gly Gly Cys Gln Ile Gln Phe Thr Val Ala Ile Asp Phe Ala
 20 25 30
 Ala Thr Asn Gly Asp Pro Arg Asn Ser Cys Ser Leu His Tyr Ile His
 35 40 45
 Pro Tyr Gln Pro Asn Glu Tyr Leu Lys Ala Leu Val Ala Val Gly Glu
 50 55 60
 Ile Cys Gln Asp Tyr Asp Ser Asp Lys Met Phe Pro Ala Phe Gly Phe
 65 70 75 80
 Gly Ala Arg Ile Pro Pro Glu Tyr Thr Val Ser His Asp Phe Ala Ile
 85 90 95
 Asn Phe Asn Glu Asp Asn Pro Glu Cys Ala Gly Ile Gln Gly Val Val
 100 105 110
 Glu Ala Tyr Gln Ser Cys Leu Pro Lys Leu Gln Leu Tyr Gly Pro Thr
 115 120 125
 Asn Ile Ala Pro Ile Ile Gln Lys Val Ala Lys Ser Ala Ser Glu Glu
 130 135 140
 Thr Asn Thr Lys Glu Ala Ser Gln Tyr Phe Ile Leu Leu Ile Leu Thr
 145 150 155 160
 Asp Gly Val Ile Thr Asp Met Gly Asp Thr Arg Glu Ala Ile Val His
 165 170 175
 Ala Ser His Leu Pro Met Ser Val Ile Ile Val Gly Val Gly Asn Ala
 180 185 190
 Asp Phe Ser Asp Met Gln Met Leu Asp Gly
 195 200

<210> 2841
 <211> 2065
 <212> DNA
 <213> Homo sapiens

<400> 2841
 nntcctagc tgctgtcctc tgctgacatt tggcaggcag cttctgccag ccaaattggtc
 60
 tcaccccagc cccccggctc tgcacccact gtgctgccca caggagtggg cctgcccattg
 120
 gaagggccag ttcaggtggc cggagctcct gagctgccct aggggactgc tgtgggtctg
 180

aggtggtgat gtccccacg gctgectgag cctgagcccc cagcatcca cccctggggc
240
cactctgctg ttccaggagca cccaccctg tctcgacca tgagcagccc cccagcttac
300
cctggcatca ggatctcagg gtgccggggc cttggagcag aaggcagcaa tgcagagtcc
360
ctggacaggc tcttgccacc tgtggggcact gggcgctctc cccggaagcg gaccaccagc
420
cagtgcgaagt cagagcctcc cctgctgctg acaagcaagc gtaccatcta caccgccggg
480
cggccgccct ggtacaatga acacggcacg caatccaaag aggccttcgc catcggttg
540
ggaggcggca gtgcctctgg gaagaccact gtggccagaa tgatcatcga ggccttgat
600
gtgccctggg tggctctgct gtccatggac tcttctaca aggtgctcca cagcctcccc
660
caccaggtgc tgactgagca gcagcaggaa caggccgcac acaacaactt caacttcgac
720
caccagatg cctttgactt cgacctcacc atttccacc tcaagaagct gaagcagggg
780
aagagtgtca aggtgcccac ttatgacttc accacgcaca gccggaagaa ggactggaaa
840
acactgtatg gtgcaaacgt catcatcttt gagggcatca tggcctttgc tgacaagaca
900
ctgttgagc tcttgagcat gaagatcttt gtggacacag actccgacat ccgcctggta
960
cggcggtgc gccgggacat cagtgcgcgc ggcggggaca tcgaggggtg catcaagcag
1020
tacaacaagt ttgtcaagcc ctcttcgac cagtacatcc agcccacat gcgcctggca
1080
gacatcgtgg tccccagagg gagcggcaac acggtggcca tcgacctgat tgtgcagcac
1140
gtgcacagcc agctggagga gcgtgaactc agcgtcaggg ctgcgctggc ctcggcacac
1200
cagtgcacc cgctgccccg gacgctgagc gtctgaaga gcacgcgcga ggtacggggc
1260
atgcacacca tcatcaggga caaggagacc agtcgcgacg agttcatctt ctactccaag
1320
agactgatgc ggctgctcat cgagcacgcg ctctccttcc tgccctttca ggactgcgtc
1380
gtacagaccc cgcaggggca ggactatgcg ggcaagtgt atgcggggaa gcagatcacc
1440
ggtgtgtcca ttctgcgcgc cggtgaaacc atggagcccg cgctgcgcgc tgtgtgcaaa
1500
gacgtgcgca tcggcaccat cctcatccag accaaccagc ttaccgggga gcccgagctc
1560
cactacctga ggctgccccaa ggacatcagc gatgaccacg tgatcctcat ggactgcacc
1620
gtgtccacgg gcgcggcggc catgatggca gtgcgcgtgc tcttgagcca cgacgtgcct
1680
gaggacaaga tctttttgct gtcgctgctc atggcagaga tgggcgtgca ctcagtggcc
1740
tatgcatttc cgcgagtgcg aatcatcacc acggcggtgg acaagcgggt caatgacctt
1800

ttccgcatca tcccaggcat tgggaacttt ggcgaccgct actttgggac agacgcggtc
 1860
 cccgatggca gtgacgagga ggaagtggcc tacacgggtt agctgcccag tgagccatcc
 1920
 cgtccccacc accctcctcc tgcctcctga cccaggactg ctgaatacaa agatgttaat
 1980
 ttttaaaatg ttactagtat aatttattct atgcatttta taaaataaat aaagctttag
 2040
 aaaaatgaaa aaaaaaaaaa aaaaa
 2065

<210> 2842
 <211> 540
 <212> PRT
 <213> Homo sapiens

<400> 2842
 Met Ser Ser Pro Pro Ala Tyr Pro Gly Ile Arg Ile Ser Gly Cys Arg
 1 5 10 15
 Ala Leu Gly Ala Glu Gly Ser Asn Ala Glu Ser Leu Asp Arg Leu Leu
 20 25 30
 Pro Pro Val Gly Thr Gly Arg Ser Pro Arg Lys Arg Thr Thr Ser Gln
 35 40 45
 Cys Lys Ser Glu Pro Pro Leu Arg Thr Ser Lys Arg Thr Ile Tyr
 50 55 60
 Thr Ala Gly Arg Pro Pro Trp Tyr Asn Glu His Gly Thr Gln Ser Lys
 65 70 75 80
 Glu Ala Phe Ala Ile Gly Leu Gly Gly Gly Ser Ala Ser Gly Lys Thr
 85 90 95
 Thr Val Ala Arg Met Ile Ile Glu Ala Leu Asp Val Pro Trp Val Val
 100 105 110
 Leu Leu Ser Met Asp Ser Phe Tyr Lys Val Leu His Ser Leu Pro His
 115 120 125
 Gln Val Leu Thr Glu Gln Gln Gln Glu Gln Ala Ala His Asn Asn Phe
 130 135 140
 Asn Phe Asp His Pro Asp Ala Phe Asp Phe Asp Leu Ile Ile Ser Thr
 145 150 155 160
 Leu Lys Lys Leu Lys Gln Gly Lys Ser Val Lys Val Pro Ile Tyr Asp
 165 170 175
 Phe Thr Thr His Ser Arg Lys Lys Asp Trp Lys Thr Leu Tyr Gly Ala
 180 185 190
 Asn Val Ile Ile Phe Glu Gly Ile Met Ala Phe Ala Asp Lys Thr Leu
 195 200 205
 Leu Glu Leu Leu Asp Met Lys Ile Phe Val Asp Thr Asp Ser Asp Ile
 210 215 220
 Arg Leu Val Arg Arg Leu Arg Arg Asp Ile Ser Glu Arg Gly Arg Asp
 225 230 235 240
 Ile Glu Gly Val Ile Lys Gln Tyr Asn Lys Phe Val Lys Pro Ser Phe
 245 250 255
 Asp Gln Tyr Ile Gln Pro Thr Met Arg Leu Ala Asp Ile Val Val Pro
 260 265 270
 Arg Gly Ser Gly Asn Thr Val Ala Ile Asp Leu Ile Val Gln His Val
 275 280 285
 His Ser Gln Leu Glu Glu Arg Glu Leu Ser Val Arg Ala Ala Leu Ala

290	295	300
Ser Ala His Gln Cys His Pro Leu Pro Arg Thr Leu Ser Val Leu Lys		
305	310	315
Ser Thr Pro Gln Val Arg Gly Met His Thr Ile Ile Arg Asp Lys Glu		320
	325	330
Thr Ser Arg Asp Glu Phe Ile Phe Tyr Ser Lys Arg Leu Met Arg Leu		335
	340	345
Leu Ile Glu His Ala Leu Ser Phe Leu Pro Phe Gln Asp Cys Val Val		350
	355	360
Gln Thr Pro Gln Gly Gln Asp Tyr Ala Gly Lys Cys Tyr Ala Gly Lys		365
	370	375
Gln Ile Thr Gly Val Ser Ile Leu Arg Ala Gly Glu Thr Met Glu Pro		380
385	390	395
Ala Leu Arg Ala Val Cys Lys Asp Val Arg Ile Gly Thr Ile Leu Ile		400
	405	410
Gln Thr Asn Gln Leu Thr Gly Glu Pro Glu Leu His Tyr Leu Arg Leu		415
	420	425
Pro Lys Asp Ile Ser Asp Asp His Val Ile Leu Met Asp Cys Thr Val		430
	435	440
Ser Thr Gly Ala Ala Ala Met Met Ala Val Arg Val Leu Leu Asp His		445
	450	455
Asp Val Pro Glu Asp Lys Ile Phe Leu Leu Ser Leu Leu Met Ala Glu		460
465	470	475
Met Gly Val His Ser Val Ala Tyr Ala Phe Pro Arg Val Arg Ile Ile		480
	485	490
Thr Thr Ala Val Asp Lys Arg Val Asn Asp Leu Phe Arg Ile Ile Pro		495
	500	505
Gly Ile Gly Asn Phe Gly Asp Arg Tyr Phe Gly Thr Asp Ala Val Pro		510
	515	520
Asp Gly Ser Asp Glu Glu Glu Val Ala Tyr Thr Gly		525
530	535	540

<210> 2843

<211> 497

<212> DNA

<213> Homo sapiens

<400> 2843

cctaggtatg aaccccaaag ccctggctat gaacctcgga gccccgggta tgaaccccg
60
agccctggct atgaatctga gagctctaga tatgaatccc agaacactga gctcaaaacc
120
caaagcccag aatttgaagc tcaaagttcc aaattccagg aaggtgcgga gatgcttctg
180
aaccccgagg aaaagagtcc tttgaatatc tccgtaggag ttcaccccct ggactccttc
240
actcaggggt ttggggagca gccacaggg gacctgccca tagggccacc ttttgagatg
300
cccacagggg ccctgctgtc tacaccgcag tttgagatgc ttcagaatcc cctgggtctc
360
acaggagccc ttcgaggtcc aggtcggcgg ggtggccggg cccggggtgg gcagggcct
420
cggcctaaca tctgtggcat ctgggggaag agcttcgggc gggactaccc tgatccagca
480

caggcatcca caccggt
497

<210> 2844

<211> 165

<212> PRT

<213> Homo sapiens

<400> 2844

```

Pro Arg Tyr Glu Pro Gln Ser Pro Gly Tyr Glu Pro Arg Ser Pro Gly
 1           5           10           15
Tyr Glu Pro Arg Ser Pro Gly Tyr Glu Ser Glu Ser Ser Arg Tyr Glu
 20           25           30
Ser Gln Asn Thr Glu Leu Lys Thr Gln Ser Pro Glu Phe Glu Ala Gln
 35           40           45
Ser Ser Lys Phe Gln Glu Gly Ala Glu Met Leu Leu Asn Pro Glu Glu
 50           55           60
Lys Ser Pro Leu Asn Ile Ser Val Gly Val His Pro Leu Asp Ser Phe
 65           70           75           80
Thr Gln Gly Phe Gly Glu Gln Pro Thr Gly Asp Leu Pro Ile Gly Pro
 85           90           95
Pro Phe Glu Met Pro Thr Gly Ala Leu Leu Ser Thr Pro Gln Phe Glu
 100          105          110
Met Leu Gln Asn Pro Leu Gly Leu Thr Gly Ala Leu Arg Gly Pro Gly
 115          120          125
Arg Arg Gly Gly Arg Ala Arg Gly Gly Gln Gly Pro Arg Pro Asn Ile
 130          135          140
Cys Gly Ile Trp Gly Lys Ser Phe Gly Arg Asp Tyr Pro Asp Pro Ala
 145          150          155          160
Gln Ala Ser Thr Pro
          165

```

<210> 2845

<211> 934

<212> DNA

<213> Homo sapiens

<400> 2845

```

ctggatggga tggacggttg cccaagcggc agtggcagtg gaggtagccc tcttgctcct
 60
accgtgtgcg cacgggctgt gcttctcggc tggacacaga gtttggggag gccacttccc
 120
ttcaccaagg ctcggggttc tatagcccct ttctgggaca gctgcatggg atccggcctc
 180
tcaggcccca cgggtgggtgc gggggctgtg gaaaggtctc agctgcaggg ggatgaatgt
 240
gacctccagt tgcaacgtct cccccgcgt gagtgggggtt atcaggccta gctcaccttg
 300
tgtgcagtca gtgtcgagtg ccacctgcgt actggatgct gctctcagtg ctgcggtgcc
 360
acagcacaca aaaatagttc tcacgttgcc gtggagagac aagcagtcaa cgcagatata
 420
tcctgtggca agtgatggta aatgctgtgg caagaaagca ggttctggag gtgaagggcg
 480

```

gtgggggaga cagggcaggg aaggtgagca gcggtctgag agtcccttgt ggcacctcgt
 540
 gggcattagc caaagccgtc ctgatcccaa gggacagggc aggggaaggtg agtagtggtc
 600
 cgagagtccc ttgtggcacc tcatgggcat cgggtcaaagc cgtcatgacc ccgaggatgt
 660
 gccaggagtc agggcctctc ctccctacgtg ggcctgaagg ggctgctgta attcaggagg
 720
 gtaggcttgg gatgaagggg ctggaatttc tgtctgccag cattagccta atgcaaattc
 780
 tttcctattc ttttctattg agttaaaggt cctggtggca ttgtcgggtg gggcacattg
 840
 ctgttgtcat agggctgttt gccttggtgt tcgtggagcc ccattgctga gcttacaacg
 900
 tcactctgct ctcatgctccc acggcctaac catg
 934

<210> 2846

<211> 149

<212> PRT

<213> Homo sapiens

<400> 2846

Met	Pro	Met	Arg	Cys	His	Lys	Gly	Leu	Ser	Asp	His	Tyr	Ser	Pro	Ser
1				5					10					15	
Leu	Pro	Cys	Pro	Leu	Gly	Ser	Gly	Arg	Leu	Trp	Leu	Met	Pro	Thr	Arg
			20					25					30		
Cys	His	Lys	Gly	Leu	Ser	Asp	Arg	Cys	Ser	Pro	Ser	Leu	Pro	Cys	Leu
		35					40					45			
Pro	His	Arg	Pro	Ser	Pro	Pro	Glu	Pro	Ala	Phe	Leu	Pro	Gln	His	Leu
	50					55					60				
Pro	Ser	Leu	Ala	Thr	Gly	Tyr	Ile	Cys	Val	Asp	Cys	Leu	Ser	Leu	His
65					70					75				80	
Gly	Asn	Val	Arg	Thr	Ile	Phe	Val	Cys	Cys	Gly	Thr	Ala	Ala	Leu	Arg
			85					90						95	
Ala	Ala	Ser	Ser	Thr	Gln	Val	Ala	Leu	Asp	Thr	Asp	Cys	Thr	Gln	Gly
			100					105					110		
Glu	Leu	Gly	Leu	Ile	Thr	Pro	Leu	Thr	Arg	Gly	Glu	Thr	Leu	Gln	Leu
		115					120					125			
Glu	Val	Thr	Phe	Ile	Pro	Leu	Gln	Leu	Arg	Pro	Phe	His	Ser	Pro	Arg
	130					135					140				
Thr	His	Arg	Gly	Ala											
145															

<210> 2847

<211> 2830

<212> DNA

<213> Homo sapiens

<400> 2847

nntgatcatg atattgcaca taccctgcc tctgctgtta taccagctc tacctctcag
 60
 gtcccccca tagcaacagt tcctccttgc ctcaaacctt cagctccatt aattcgccgt
 120

cagctctcac atgaccacga atctgttggc cctcctagcc tggatgctca gcccaactca
180
aagacagaaa gatcaaaatc atatgatgag ggtctggatg attacagaga agatgcaaaa
240
ttgtccttta agcacgtatc tagtctgaag ggaatcaaga tcgcagacag ccaaaagtca
300
tcagaagact ctgggtccag aaaagattct tcctcagagg tcttcagtga tgctgccaag
360
gaaggggtggc ttcatttccg accccttgtc accgataagg gcaagcgagt tgggtggaagt
420
attcggccat ggaaacagat gtatgttgtc ctteggggtc attcacttta cctgtacaaa
480
gataaaaagag agcagacgac tccgtctgag gaagagcagc ccatcagtgt taatgcttgc
540
ttgatagaca tctcttacag tgagaccaag aggaaaaatg tgtttcgact caccacgtcc
600
gactgtgaat gcctgtttca ggctgaagac agagatgata tgctagcttg gatcaagacg
660
atccaggaga gcagcaacct aaacgaagag gacactggag tcactaacag ggatctaatt
720
agtcgaagaa taaaagaata caacaatctg atgagcaaag cagaacagtt gccaaaaaca
780
cctcgccaga gtctcagcat caggcaaact ttgcttggtg ctaaatacaga gccaaagact
840
caaagccac actctccgaa ggaagagtcg gaaaggaaac ttctcagtaa agatgatacc
900
agtcccccac aagacaaagg cacatggaga aaaggcattc caagtatcat gagaaagaca
960
tttgagaaaa agccaactgc tacaggaact ttcggcgctc gactagatga ctgcccacca
1020
gtcatacta atcgggtatat tccattaata gttgacatat gttgcaaatt agttgaagaa
1080
agaggtcttg aatatacagg tattttataga gttcctggaa ataatgcagc catctcaagt
1140
atgcaagaag aactcaacaa gggaaatggct gatattgata tacaagatga taaatggcga
1200
gatttgaatg tgataagcag ttactaaaaa tccttcttca gaaaactccc tgagcctctc
1260
ttcacaaatg ataaatatgc tgattttatt gaagccaatc gtaaagaaga tcctctagat
1320
cgtctgaaaa cattaaaaag actaattcac gatttgcttg aacatcatta tgaaacactt
1380
aagttccttt cagctcatct gaagacagtg gcagaaaatt cagaaaaaaa taagatggaa
1440
ccaagaaacc tagcaatagt gtttgggtccc acccttggtc gaacatcaga agacaacatg
1500
acccacatgg tcaccacat gcctgaccag tacaagattg tagaaacgct catccagcac
1560
catgactggg ttttcacaga agaaggtgct gaagagcctc ttacaacagt gcaggaggaa
1620
agcacagtag actcccagcc agtgccaaac atagatcatt tactcaccaa cattggaagg
1680
acaggagtct cccagggaga tgtatcagat tcagctacta gtgactcaac aaaatctaag
1740

gggtcttggg gatctggaaa ggatcagtat agcagggaac tgcttgtgtc ctccatcttt
 1800
 gcagctgcta gtcgcaagag gaagaagccg aaagaaaaag cacagcctag cagctcagaa
 1860
 gatgaactgg acaatgtatt ttttaagaaa gaaaatgtgg aacagtgtca caatgatact
 1920
 aaagaggagt ccaaaaaaga aagtgagaca ctgggcagaa aacagaagat catcattgcc
 1980
 aaagaaaaca gcactaggaa agaccccagc acgacaaaag atgaaaagat atcactagga
 2040
 aaagagagca cgccttctga agaaccctca ccaccacaca actcaaaaca caacaagtca
 2100
 ccaactctca gctgtcgctt tgccatcctg aaagagagcc ccaggtcact tctggcacag
 2160
 aagtcctccc accttgaaga gacaggctct gactctggca ctttgctcag cacgtcttcc
 2220
 caggcctccc tggcaagggt ttccatgaag aaatcaacca gtccagaaac gaaacatagc
 2280
 gagtttttgg ccaacgtcag caccatcacc tcagattatt ccaccacatc gtctgtctaca
 2340
 tacttgacta gcctggactc cagtcgactg agccctgagg tgcaatccgt ggcagagagc
 2400
 aagggggacg aggcagatga cgagagaagc gaactcatca gtgaagggcg gcctgtggaa
 2460
 accgacagcg ggaacgagtt tcccattttc cccacagcct tgacttcaga gaggttttcc
 2520
 cgaggagaac tgcaaaaagt gactaagagc agccggagaa attctgaatg aagtgaagta
 2580
 agttgcaccg aggggaagttt aacatcaagt ttagatagcc ggagacagct cttcagttcc
 2640
 cataaactca tcacatgtga tactctctcc aggaaaaaat cagcgagatt caagtcagac
 2700
 agtggaagtc taggagatgc caagaacgag aaagaaacac cttcattaac taaagtgttt
 2760
 gatgttatga aaaaaggaaa gtcaactggg agtttactga caccaccag aggcgaatcc
 2820
 gaaaaacagg
 2830

<210> 2848

<211> 856

<212> PRT

<213> Homo sapiens

<400> 2848

Xaa	Asp	His	Asp	Ile	Ala	His	Ile	Pro	Ala	Ser	Ala	Val	Ile	Ser	Ala
1				5				10					15		
Ser	Thr	Ser	Gln	Val	Pro	Ser	Ile	Ala	Thr	Val	Pro	Pro	Cys	Leu	Thr
			20					25					30		
Thr	Ser	Ala	Pro	Leu	Ile	Arg	Arg	Gln	Leu	Ser	His	Asp	His	Glu	Ser
		35					40				45				
Val	Gly	Pro	Pro	Ser	Leu	Asp	Ala	Gln	Pro	Asn	Ser	Lys	Thr	Glu	Arg
	50					55				60					
Ser	Lys	Ser	Tyr	Asp	Glu	Gly	Leu	Asp	Asp	Tyr	Arg	Glu	Asp	Ala	Lys

65		70		75		80									
Leu	Ser	Phe	Lys	His	Val	Ser	Ser	Leu	Lys	Gly	Ile	Lys	Ile	Ala	Asp
				85					90					95	
Ser	Gln	Lys	Ser	Ser	Glu	Asp	Ser	Gly	Ser	Arg	Lys	Asp	Ser	Ser	Ser
			100					105					110		
Glu	Val	Phe	Ser	Asp	Ala	Ala	Lys	Glu	Gly	Trp	Leu	His	Phe	Arg	Pro
		115					120					125			
Leu	Val	Thr	Asp	Lys	Gly	Lys	Arg	Val	Gly	Gly	Ser	Ile	Arg	Pro	Trp
	130					135					140				
Lys	Gln	Met	Tyr	Val	Val	Leu	Arg	Gly	His	Ser	Leu	Tyr	Leu	Tyr	Lys
145					150					155					160
Asp	Lys	Arg	Glu	Gln	Thr	Thr	Pro	Ser	Glu	Glu	Gln	Pro	Ile	Ser	
			165						170					175	
Val	Asn	Ala	Cys	Leu	Ile	Asp	Ile	Ser	Tyr	Ser	Glu	Thr	Lys	Arg	Lys
			180					185					190		
Asn	Val	Phe	Arg	Leu	Thr	Thr	Ser	Asp	Cys	Glu	Cys	Leu	Phe	Gln	Ala
		195					200					205			
Glu	Asp	Arg	Asp	Asp	Met	Leu	Ala	Trp	Ile	Lys	Thr	Ile	Gln	Glu	Ser
	210					215					220				
Ser	Asn	Leu	Asn	Glu	Glu	Asp	Thr	Gly	Val	Thr	Asn	Arg	Asp	Leu	Ile
225					230					235					240
Ser	Arg	Arg	Ile	Lys	Glu	Tyr	Asn	Asn	Leu	Met	Ser	Lys	Ala	Glu	Gln
			245					250					255		
Leu	Pro	Lys	Thr	Pro	Arg	Gln	Ser	Leu	Ser	Ile	Arg	Gln	Thr	Leu	Leu
		260					265					270			
Gly	Ala	Lys	Ser	Glu	Pro	Lys	Thr	Gln	Ser	Pro	His	Ser	Pro	Lys	Glu
		275					280					285			
Glu	Ser	Glu	Arg	Lys	Leu	Leu	Ser	Lys	Asp	Asp	Thr	Ser	Pro	Pro	Lys
	290					295					300				
Asp	Lys	Gly	Thr	Trp	Arg	Lys	Gly	Ile	Pro	Ser	Ile	Met	Arg	Lys	Thr
305					310					315					320
Phe	Glu	Lys	Lys	Pro	Thr	Ala	Thr	Gly	Thr	Phe	Gly	Val	Arg	Leu	Asp
			325					330					335		
Asp	Cys	Pro	Pro	Ala	His	Thr	Asn	Arg	Tyr	Ile	Pro	Leu	Ile	Val	Asp
			340				345					350			
Ile	Cys	Cys	Lys	Leu	Val	Glu	Glu	Arg	Gly	Leu	Glu	Tyr	Thr	Gly	Ile
	355					360					365				
Tyr	Arg	Val	Pro	Gly	Asn	Asn	Ala	Ala	Ile	Ser	Ser	Met	Gln	Glu	Glu
	370				375						380				
Leu	Asn	Lys	Gly	Met	Ala	Asp	Ile	Asp	Ile	Gln	Asp	Asp	Lys	Trp	Arg
385					390					395					400
Asp	Leu	Asn	Val	Ile	Ser	Ser	Leu	Leu	Lys	Ser	Phe	Phe	Arg	Lys	Leu
			405						410				415		
Pro	Glu	Pro	Leu	Phe	Thr	Asn	Asp	Lys	Tyr	Ala	Asp	Phe	Ile	Glu	Ala
		420					425					430			
Asn	Arg	Lys	Glu	Asp	Pro	Leu	Asp	Arg	Leu	Lys	Thr	Leu	Lys	Arg	Leu
	435					440					445				
Ile	His	Asp	Leu	Pro	Glu	His	His	Tyr	Glu	Thr	Leu	Lys	Phe	Leu	Ser
	450					455				460					
Ala	His	Leu	Lys	Thr	Val	Ala	Glu	Asn	Ser	Glu	Lys	Asn	Lys	Met	Glu
465					470					475					480
Pro	Arg	Asn	Leu	Ala	Ile	Val	Phe	Gly	Pro	Thr	Leu	Val	Arg	Thr	Ser
			485					490					495		
Glu	Asp	Asn	Met	Thr	His	Met	Val	Thr	His	Met	Pro	Asp	Gln	Tyr	Lys

gcgcgcgctgg agagggcgcg ggagttggca ttcggtggtc ctggcagtta gctgagcacg
60

ccctctgagc cgctcgggtg acaccaggca ctctagtagg cctggcctac ccagaaacag
 120
 caggagagag aagaaacagg ccagctgtga gaagccaagg acaccgagtc ggtcatggca
 180
 cctaaggcgg caaagggggc caagccagag ccagcaccag ctccacctcc acccgggggc
 240
 aaacccgagg aagacaagaa ggacggtaag gagccatcgg acaaacctca aaaggcgggtg
 300
 caggaccata aggagccatc ggacaaacct caaaaggcgg tgcagcccaa gcacgaagtg
 360
 ggcacgaagg aggggtgtcg
 380

<210> 2850
 <211> 76
 <212> PRT
 <213> Homo sapiens

<400> 2850
 Glu Ala Lys Asp Thr Glu Ser Val Met Ala Pro Lys Ala Ala Lys Gly
 1 5 10 15
 Ala Lys Pro Glu Pro Ala Pro Ala Pro Pro Pro Gly Ala Lys Pro
 20 25 30
 Glu Glu Asp Lys Lys Asp Gly Lys Glu Pro Ser Asp Lys Pro Gln Lys
 35 40 45
 Ala Val Gln Asp His Lys Glu Pro Ser Asp Lys Pro Gln Lys Ala Val
 50 55 60
 Gln Pro Lys His Glu Val Gly Thr Lys Glu Gly Cys
 65 70 75

<210> 2851
 <211> 2459
 <212> DNA
 <213> Homo sapiens

<400> 2851
 nntgatcaga gtctgactct tgcccaacac tctgttgaac tgactttacc caatcatcat
 60
 ccatttcata gagatttgct ccgatatgcc aagctgatgg agtggctaaa gagtacagat
 120
 tatggaaaat atgaaggact aacaaagaat tacatggatt atttatcccg actatatgaa
 180
 agagaaatca aagattttctt tgaagttgca aagatcaaga tgactggcac aactaaagaa
 240
 agcaagaagt ttggtcttca tggaagttcg gggaaattaa ctggatctac ttctagtcta
 300
 aataagctca gtgttcagag ttcagggaat cgcagatctc agtcattctc cctgttggat
 360
 atgggaaaca tgtctgcctc tgatctcgat gttgctgaca ggaccaaatt tgataagatc
 420
 ttggaacagg tactaagtga actggagccc ctatgtctgg cagaacagga cttcataagt
 480
 aaatttttca aactacagca acatcaaagt gtgcctggaa ctatgaaatt ttaagactga
 540

gcaggctttt gctatatcaa tactagtcaa attggttggtc ttttattatg taaagtgctt
600
gaataatttt tgcaggctga agcagaggac ctggatggag gaacattatc acggcaacat
660
aattgtggca caccactgcc tgtttcatct gagaaagata tgatccgccca gatgatgatt
720
aaaatatttc gctgcattga gccagagctg aacaacctaa ttgcattagg agacaaaatt
780
gatagcttta actctcttta tatgttagtc aaaatgagtc atcatgtgtg gactgcacaa
840
aatgtggacc ctgcttcttt cctaagtact acattgggaa atgttttggt gactgtcaaa
900
aggaactttg acaaatgcat tagtaaccaa ataaggcaaa tggaagaagt aaagatctca
960
aaaaagagta aagttggaat tcttccattt gttgctgaat ttgaagaatt tgctggactt
1020
gcagaatcaa tcttcaaaaa tgctgagcgt cgtggagacc tggataaagc atacaccaa
1080
cttatcagag gagtatttgt taatgtggag aaagtagcaa atgaaagcca gaagaccccc
1140
agggatgtgg ttatgatgga aaactttcac catatttttg caactctttc tcgattgaaa
1200
atctcatgtc tagaagcaga aaaaaagaa gccaaacaaa aatacacaga tcaccttcag
1260
tcttatgtca tttactcttt aggacaacct cttgaaaaac taaatcattt ctttgaaggt
1320
gttgaagctc gcgtggcaca gggcataagg gaggaggaag taagttacca acttgcattt
1380
aacaacaag aacttcgtaa agtcattaag gagtaccctg gaaaggaagt aaaaaaggt
1440
ctagataacc tctacaagaa agttgataaa catttatgtg aagaagagaa cttacttcag
1500
gtggtgtggc actccatgca agatgaattt atacgccagt ataagcactt tgaaggtttg
1560
atagctcgct gttatcctgg atctggtgtt acaatggaat tcactattca ggacattctg
1620
gattattgtt ccagcattgc acagtccac taaacctgtg gaaagaagaa aagataactg
1680
aatgaagcat ttgagtataa cagacactat accaaaatac caagcaactg ttttgagaac
1740
ccagacttaa aattttatgt attattaaat gttagataaa tgggtagtac catactacaa
1800
atattttaa gcaaaattac caacctatat agcagtttta tttgccctat aggttgcata
1860
ctaacttaag cattcatgtc accataaaaat gccttttagca tttctcaatg actggatggg
1920
aaattttcct ttattgccta gctgcttggt tttgagtggg tgtcctatga gcaatgcatt
1980
tgaggttctt cagctttcac tacttctctg ttgcttgcta atcatgtaac tactaaaata
2040
ctgtacaaaa ttgttttttt cactactaaca aatgtgtata tggagaagag ggctcatgtg
2100
atgatcattt gtgaacttag atttttgagg attatgtgac tagtaataaa tgtgaaataa
2160

attttcaaaa aagttgacat ttgaaaaaaa aattagtaac caaataaggc aaatggaaga
 2220
 agtaaagatc tcaaaaaaga gtaaagttgg aattcttcca tttgttgctg aatttgaaga
 2280
 atttgctgga cttgcagaat caatcttcaa aaatgctgag cgtcgtggag acctggataa
 2340
 agcatacacc aaacttatca gaggagtatt tgtcaatgtg gagaaagtag caaatgaaag
 2400
 ccagaagacc cccagggatg tggttatgat ggaaaacttt caccatattt ttgcaactc
 2459

<210> 2852

<211> 317

<212> PRT

<213> Homo sapiens

<400> 2852

Met	Ile	Arg	Gln	Met	Met	Ile	Lys	Ile	Phe	Arg	Cys	Ile	Glu	Pro	Glu
1				5				10					15		
Leu	Asn	Asn	Leu	Ile	Ala	Leu	Gly	Asp	Lys	Ile	Asp	Ser	Phe	Asn	Ser
			20					25					30		
Leu	Tyr	Met	Leu	Val	Lys	Met	Ser	His	His	Val	Trp	Thr	Ala	Gln	Asn
		35					40					45			
Val	Asp	Pro	Ala	Ser	Phe	Leu	Ser	Thr	Thr	Leu	Gly	Asn	Val	Leu	Val
	50					55					60				
Thr	Val	Lys	Arg	Asn	Phe	Asp	Lys	Cys	Ile	Ser	Asn	Gln	Ile	Arg	Gln
65				70						75				80	
Met	Glu	Glu	Val	Lys	Ile	Ser	Lys	Lys	Ser	Lys	Val	Gly	Ile	Leu	Pro
			85						90					95	
Phe	Val	Ala	Glu	Phe	Glu	Glu	Phe	Ala	Gly	Leu	Ala	Glu	Ser	Ile	Phe
		100						105					110		
Lys	Asn	Ala	Glu	Arg	Arg	Gly	Asp	Leu	Asp	Lys	Ala	Tyr	Thr	Lys	Leu
	115					120						125			
Ile	Arg	Gly	Val	Phe	Val	Asn	Val	Glu	Lys	Val	Ala	Asn	Glu	Ser	Gln
	130					135					140				
Lys	Thr	Pro	Arg	Asp	Val	Val	Met	Met	Glu	Asn	Phe	His	His	Ile	Phe
145				150						155				160	
Ala	Thr	Leu	Ser	Arg	Leu	Lys	Ile	Ser	Cys	Leu	Glu	Ala	Glu	Lys	Lys
			165						170					175	
Glu	Ala	Lys	Gln	Lys	Tyr	Thr	Asp	His	Leu	Gln	Ser	Tyr	Val	Ile	Tyr
		180						185					190		
Ser	Leu	Gly	Gln	Pro	Leu	Glu	Lys	Leu	Asn	His	Phe	Phe	Glu	Gly	Val
	195						200					205			
Glu	Ala	Arg	Val	Ala	Gln	Gly	Ile	Arg	Glu	Glu	Glu	Val	Ser	Tyr	Gln
	210					215					220				
Leu	Ala	Phe	Asn	Lys	Gln	Glu	Leu	Arg	Lys	Val	Ile	Lys	Glu	Tyr	Pro
225				230						235				240	
Gly	Lys	Glu	Val	Lys	Lys	Gly	Leu	Asp	Asn	Leu	Tyr	Lys	Lys	Val	Asp
			245						250					255	
Lys	His	Leu	Cys	Glu	Glu	Glu	Asn	Leu	Leu	Gln	Val	Val	Trp	His	Ser
		260					265						270		
Met	Gln	Asp	Glu	Phe	Ile	Arg	Gln	Tyr	Lys	His	Phe	Glu	Gly	Leu	Ile
	275						280						285		
Ala	Arg	Cys	Tyr	Pro	Gly	Ser	Gly	Val	Thr	Met	Glu	Phe	Thr	Ile	Gln

290 295 300
Asp Ile Leu Asp Tyr Cys Ser Ser Ile Ala Gln Ser His
305 310 315

<210> 2853
<211> 4993
<212> DNA
<213> Homo sapiens

<400> 2853
cgcgagacgag accgggggctg tgggtgcggag agaggctgag acggagaaga ggagaggcag
60
agaggggcgcg gggaccgtca gcagcacctt agctacaatc gttcagctat tctcgaaga
120
gagaaggggag agggaggagg ccggggcggg agtgggggct gtcaccctcg gaccccgcg
180
tgagagggggc cgtgcggccg gacgtcctcg ggggtgggccc ccagtcggtg gccgaagacc
240
tacagctcag gcccctgggt cccaaatttc caggctttgc .ccctcctcct ttctcagata
300
cccgggtaac agtcctcata gtccagatat ccgggactcg ggtcccaacc tctctaaacc
360
tgggtctctg tttcatagat tttcaaatat caggttcagg ccctgcgtg caccagtatc
420
cggggttcat tccccgggcg tttcaaatat cggattcagt ctccatcccg ttcagatatt
480
cggggttcag accccacaat cagaaatccg gaattcggca gctgtcgccc tcgacgaggg
540
ggaggactgg accgcgaggt cagattaggt tgtcaccccc tcccctccag gggaggcttc
600
ccggggcccg cccctcaggaa gggcgaaagc cgaggaagag gtggcaaggg gaaaggcttc
660
cttggccctc tccctgcttg gcagagccgc tggaggaccc caggcggaag cggaggcgct
720
ggggcaccat agtgaccctt accaggccag gcccactct caggggcccc aggggccacc
780
atgccagctg ggggcccggc cgggagcctg aaggacccag atgtggctga gctcttcttc
840
aaggatgacc cagaaaagct ctctcttgac ctccgggaaa ttggccatgg cagctttgga
900
gccgtatact ttgcccggga tgtccggaat agtgagggtg tggccatcaa gaagatgtcc
960
tacagtggga agcagtccaa tgagaaatgg caagacatca tcaaggaggt gcggttctta
1020
cagaagctcc ggcattccaa caccattcag taccggggct gttacctgag ggagcacacg
1080
gcttggctgg taatggagta ttgcctgggc tcagcttctg accttctaga agtgacaaag
1140
aaaccccttc aggaggtaga gatcgcagct gtgacccatg gggcgcttca gggcctggca
1200
tatctgcact cccacaacat gatccatagg gatgtgaagg ctggaaacat cctgctgtca
1260
gagccagggt tagtgaagct aggggacttt ggttctgcgt ccatcatggc acctgccaac
1320

tccttcgtgg gcaccccata ctggatggca cccgaggtga tcctggccat ggatgagggg
1380
cagtacgatg gcaaagtgga cgtctggtcc ttggggataa cctgcatcga gctggctgaa
1440
cggaaccac cgctctttaa catgaatgcg atgagtgcct tataccacat tgcacagaac
1500
gaatcccccg tgctccagtc aggacactgg tctgagtact tccggaattt tgtcgactcc
1560
tgtcttcaga aaatccctca agacagacca acctcagagg ttctcctgaa gcaccgcttt
1620
gtgctccggg agcggccacc cacagtcac atggacctga tccagaggac caaggatgcc
1680
gtgcgggagc tggacaacct gcagtaccgc aagatgaaga agatcctgtt ccaagaggca
1740
cccaacggcc ctggtgccga ggccccagag gaggaagagg aggccgagcc ctacatgcac
1800
cgggccggga ctctgaccag cctcgagagt agccactcag tgcccagcat gtccatcagc
1860
gcctccagcc agagcagctc cgtcaacagc ctagcagatg cctcagacaa cgaggaagag
1920
gaggaggagg aggaggaaga ggaggaggag gaagaaggcc ctgaagcccc ggagatggcc
1980
atgatgcagg aggggggagca cacagtcacc tctcacagct ccattatcca ccggctgccg
2040
ggctctgaca acctatatga tgaccctac cagccagaga taacccccag ccctctccag
2100
ccgcctgcag cccagctcc cacttccacc acctcttccg cccgccgccg ggctactgc
2160
cgtaaccgag accactttgc caccatccga accgcctccc tggtcagccg tcagatccag
2220
gagcatgagc aggactctgc gctgcgggag cagctgagcg gctataagcg gatgcgacga
2280
cagcaccaga agcagctgct ggccctggag tcacggctga ggggtgaacg ggaggagcac
2340
agtgcacggc tgcagcggga gcttgaggcg cagcgggctg gctttggggc agaggcagaa
2400
aagctggccc ggcggcacca ggccataggt gagaaggagg cacgagctgc ccaggccgag
2460
gagcggaagt tccagcagca catccttggg cagcagaaga aggagctggc tgccctgctg
2520
gaggcacaga agcggacctc caaacttcgc aaggaacagc tgaaggagga gctccaggag
2580
aaccacagca ctcccaagcg ggagaaggcc gagtggctgc tgcggcagaa ggagcagctc
2640
cagcagtgcc aggcggagga ggaagcaggg ctgctgcggc ggcagcgcca gtactttgag
2700
ctgcagtgtc gccagtacaa gcgcaagatg ttgctggctc ggcacagcct ggaccaggac
2760
ctgctgcggg aggacctgaa caagaagcag acccagaagg acttgagtg tgactgctg
2820
cttcggcagc acgaggccac gcgggagctg gagctgcggc agctccaggc cgtgcagcgc
2880
acgcgggctg agctcacccg cctgcagcac cagacggagc tgggcaacca gctggagtac
2940

aacaagcggc gtgagcaaga gttgcggcag aagcatgcgg cccagggttcg ccagcagccc
3000
aagagcctca aagtacgtgc aggccagcgc ccccggggcc ttccactccc cattcctggg
3060
gctctggggc caccacaacac aggcacccct atagaacagc agccctgctc acctggccag
3120
gaggcagtcc tggaccaaaag aatgcttggc gaggaggagg aagcagttgg agagagaagg
3180
attctgggaa aggaaggggc cactttggag cccaagcagc agaggattct gggggaagaa
3240
tcaggagccc ctagtcccag tccacaaaaa catgggagcc tggttgatga ggaagtttgg
3300
ggtctgcctg aggagataga ggagcttagg gtgcctccc ttgtacccca ggagaggagc
3360
attgttggcc aggaggaggc tgggacgtgg agcttgtggg ggaaggagga tgagagtctt
3420
ctggatgagg agtttgagct tggctgggtc caggggcccag cactgactcc cgtccctgag
3480
gaggaggaag aagaggaaga gggggctccg attgggaccc ctagggatcc tggagatggt
3540
tgtccttccc ccgacatccc tcctgaaccc cctccaacac acctgaggcc ctgccctgcc
3600
agccagctcc ctggactcct gtcccatggc ctctggccg gcctctcctt tgcagtgggg
3660
tcctcctctg gcctcctgcc cctcctgctg ctgctgctgc ttccattgct ggcagcccag
3720
ggtgggggtg gcctgcaggc agcgtgctg gcccttgagg tggggctggt gggctctggg
3780
gcctcctacc tgctcctttg tacagccctg cacctgccct ccagtctttt cctactcctg
3840
gcccagggtg ccgcactggg ggccgtcctg ggcttgagct ggcgccgagg cctcatgggt
3900
gttcccctgg gccttgagc tgcttggtc ttagcttggc caggcctagc tctacctctg
3960
gtggctatgg cagcgggggg cagatgggtg cggcagcagg gccccgggt gcgccggggc
4020
atatctcgac tctggttgct ggttctgctg cgcctgtcac ccatggcctt ccgggccctg
4080
cagggtctgt gggctgtggg ggaccggggc ctgtttgcac tgtaccccaa aaccaacaag
4140
gatggcttcc gcagccgct gcccgctcct gggccccggc ggcgtaatcc ccgcaccacc
4200
caacacccat tagctctgtt ggcaagggtc tgggtcctgt gcaagggtg gaactggcgt
4260
ctggcacggg ccagccaggg ttagcatcc cacttgcccc cgtggggccat ccacacactg
4320
gccagctggg gcctgcttcg gggtgaaacg cccacccgaa tccccgggt actaccacgc
4380
agccagcgc agctagggcc ccctgcctcc caccagccac tgccagggac tctagccggg
4440
cggaggtcac gcacccgcca gtcccggggc ctgccccctt ggaggttagct gactccagcc
4500
cttccagccc aaatctagag cattgagcac tttatctccc acgactcagt gaagtttctc
4560

cagtccttag tctctctttt tcacccacct tctcagttt gctcacttac cccaggccca
 4620
 gcccttcgga cctctagaca ggcagcctcc tcagctgtgg agtcagcag tcactctgtg
 4680
 ttctcctggc gctcctcccc taagttattg ctgttcgccc gctgtgtgtg ctcactctca
 4740
 ccttcattga ctcaggcctg gggccagggg tgggtggaggg tgggaagagt catgtttttt
 4800
 ttctcctctt tgattttgtt tttctgtctc ccttccaacc tgtccccttc cccccacaa
 4860
 aaaaagaaaa agacaaacac aaataaaata tctgagcgga actgtgaaaa aaaaaaaaaa
 4920
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 4980
 aaaaaaaaaa aaa
 4993

<210> 2854

<211> 1235

<212> PRT

<213> Homo sapiens

<400> 2854

Met	Pro	Ala	Gly	Gly	Arg	Ala	Gly	Ser	Leu	Lys	Asp	Pro	Asp	Val	Ala
1			5					10						15	
Glu	Leu	Phe	Phe	Lys	Asp	Asp	Pro	Glu	Lys	Leu	Phe	Ser	Asp	Leu	Arg
		20					25					30			
Glu	Ile	Gly	His	Gly	Ser	Phe	Gly	Ala	Val	Tyr	Phe	Ala	Arg	Asp	Val
	35					40					45				
Arg	Asn	Ser	Glu	Val	Val	Ala	Ile	Lys	Lys	Met	Ser	Tyr	Ser	Gly	Lys
	50				55					60					
Gln	Ser	Asn	Glu	Lys	Trp	Gln	Asp	Ile	Ile	Lys	Glu	Val	Arg	Phe	Leu
65				70				75						80	
Gln	Lys	Leu	Arg	His	Pro	Asn	Thr	Ile	Gln	Tyr	Arg	Gly	Cys	Tyr	Leu
			85				90					95			
Arg	Glu	His	Thr	Ala	Trp	Leu	Val	Met	Glu	Tyr	Cys	Leu	Gly	Ser	Ala
	100					105						110			
Ser	Asp	Leu	Leu	Glu	Val	His	Lys	Lys	Pro	Leu	Gln	Glu	Val	Glu	Ile
	115					120					125				
Ala	Ala	Val	Thr	His	Gly	Ala	Leu	Gln	Gly	Leu	Ala	Tyr	Leu	His	Ser
	130				135					140					
His	Asn	Met	Ile	His	Arg	Asp	Val	Lys	Ala	Gly	Asn	Ile	Leu	Leu	Ser
145				150				155						160	
Glu	Pro	Gly	Leu	Val	Lys	Leu	Gly	Asp	Phe	Gly	Ser	Ala	Ser	Ile	Met
		165					170						175		
Ala	Pro	Ala	Asn	Ser	Phe	Val	Gly	Thr	Pro	Tyr	Trp	Met	Ala	Pro	Glu
	180					185						190			
Val	Ile	Leu	Ala	Met	Asp	Glu	Gly	Gln	Tyr	Asp	Gly	Lys	Val	Asp	Val
	195					200					205				
Trp	Ser	Leu	Gly	Ile	Thr	Cys	Ile	Glu	Leu	Ala	Glu	Arg	Lys	Pro	Pro
	210				215						220				
Leu	Phe	Asn	Met	Asn	Ala	Met	Ser	Ala	Leu	Tyr	His	Ile	Ala	Gln	Asn
225				230				235						240	
Glu	Ser	Pro	Val	Leu	Gln	Ser	Gly	His	Trp	Ser	Glu	Tyr	Phe	Arg	Asn

2091

675	680	685
Glu Leu Glu Leu Arg Gln Leu Gln Ala Val Gln Arg Thr Arg Ala Glu		
690	695	700
Leu Thr Arg Leu Gln His Gln Thr Glu Leu Gly Asn Gln Leu Glu Tyr		
705	710	715
Asn Lys Arg Arg Glu Gln Glu Leu Arg Gln Lys His Ala Ala Gln Val		
725	730	735
Arg Gln Gln Pro Lys Ser Leu Lys Val Arg Ala Gly Gln Arg Pro Pro		
740	745	750
Gly Leu Pro Leu Pro Ile Pro Gly Ala Leu Gly Pro Pro Asn Thr Gly		
755	760	765
Thr Pro Ile Glu Gln Gln Pro Cys Ser Pro Gly Gln Glu Ala Val Leu		
770	775	780
Asp Gln Arg Met Leu Gly Glu Glu Glu Ala Val Gly Glu Arg Arg		
785	790	795
Ile Leu Gly Lys Glu Gly Ala Thr Leu Glu Pro Lys Gln Gln Arg Ile		
805	810	815
Leu Gly Glu Glu Ser Gly Ala Pro Ser Pro Ser Pro Gln Lys His Gly		
820	825	830
Ser Leu Val Asp Glu Glu Val Trp Gly Leu Pro Glu Glu Ile Glu Glu		
835	840	845
Leu Arg Val Pro Ser Leu Val Pro Gln Glu Arg Ser Ile Val Gly Gln		
850	855	860
Glu Glu Ala Gly Thr Trp Ser Leu Trp Gly Lys Glu Asp Glu Ser Leu		
865	870	875
Leu Asp Glu Glu Phe Glu Leu Gly Trp Val Gln Gly Pro Ala Leu Thr		
885	890	895
Pro Val Pro Glu Glu Glu Glu Glu Glu Glu Gly Ala Pro Ile Gly		
900	905	910
Thr Pro Arg Asp Pro Gly Asp Gly Cys Pro Ser Pro Asp Ile Pro Pro		
915	920	925
Glu Pro Pro Pro Thr His Leu Arg Pro Cys Pro Ala Ser Gln Leu Pro		
930	935	940
Gly Leu Leu Ser His Gly Leu Leu Ala Gly Leu Ser Phe Ala Val Gly		
945	950	955
Ser Ser Ser Gly Leu Leu Pro Leu Leu Leu Leu Leu Leu Pro Leu		
965	970	975
Leu Ala Ala Gln Gly Gly Gly Gly Leu Gln Ala Ala Leu Leu Ala Leu		
980	985	990
Glu Val Gly Leu Val Gly Leu Gly Ala Ser Tyr Leu Leu Cys Thr		
995	1000	1005
Ala Leu His Leu Pro Ser Ser Leu Phe Leu Leu Leu Ala Gln Gly Thr		
1010	1015	1020
Ala Leu Gly Ala Val Leu Gly Leu Ser Trp Arg Arg Gly Leu Met Gly		
1025	1030	1035
Val Pro Leu Gly Leu Gly Ala Ala Trp Leu Leu Ala Trp Pro Gly Leu		
1045	1050	1055
Ala Leu Pro Leu Val Ala Met Ala Ala Gly Gly Arg Trp Val Arg Gln		
1060	1065	1070
Gln Gly Pro Arg Val Arg Arg Gly Ile Ser Arg Leu Trp Leu Arg Val		
1075	1080	1085
Leu Leu Arg Leu Ser Pro Met Ala Phe Arg Ala Leu Gln Gly Cys Gly		
1090	1095	1100
Ala Val Gly Asp Arg Gly Leu Phe Ala Leu Tyr Pro Lys Thr Asn Lys		

1105		1110		1115		1120
Asp Gly Phe Arg Ser Arg Leu Pro Val Pro Gly Pro Arg Arg Arg Asn						
	1125		1130		1135	
Pro Arg Thr Thr Gln His Pro Leu Ala Leu Leu Ala Arg Val Trp Val						
	1140		1145		1150	
Leu Cys Lys Gly Trp Asn Trp Arg Leu Ala Arg Ala Ser Gln Gly Leu						
	1155		1160		1165	
Ala Ser His Leu Pro Pro Trp Ala Ile His Thr Leu Ala Ser Trp Gly						
	1170		1175		1180	
Leu Leu Arg Gly Glu Arg Pro Thr Arg Ile Pro Arg Leu Leu Pro Arg						
1185		1190		1195		1200
Ser Gln Arg Gln Leu Gly Pro Pro Ala Ser His Gln Pro Leu Pro Gly						
	1205		1210		1215	
Thr Leu Ala Gly Arg Arg Ser Arg Thr Arg Gln Ser Arg Ala Leu Pro						
	1220		1225		1230	
Pro Trp Arg						
1235						

<210> 2855

<211> 1676

<212> DNA

<213> Homo sapiens

<400> 2855

```

ctgaccacat ctcccaactt catggtgctg atcgccacct ccgtggagac ctcagccgcc
60
agtggcagcc ccgagggagc tagaatgacc acagttcaga ccatcacagg cagtgatccc
120
gaggaagcca tctttgacac cctttgcacc gatgacagct ctgaagaggc aaagacactc
180
acaatggaca tattgacatt ggctcacacc tccacagaag ctaagggcct gtcctcagag
240
agcagcgctt cttccgacgg ccccatcca gtcacacccc cgtcacgggc ctcagagagc
300
agcgcctctt ccgacggccc ccatccagtc atcacccgt caccgggcctc agagagcagc
360
gcctcttccg acggccccc tccagtcac accccgtcat ggtccccggg atctgatgtc
420
actctcctcg ctgaagccct ggtgactgtc acaaacatcg aggttattaa ttgcagcatc
480
acagaaatag aaacaacgac ttccagcatc cctggggcct cagacacaga tctcatcccc
540
acggaagggg tgaaggcctc gtccacctcc gatccaccag ctctgcctga ctccnnactg
600
aagcaaaacc acacatcact gaggtcanca gcctctgccg agaccctgtc cacagccggc
660
accacagagt cagctgcacc tgatgccacg gttgggaccc cactccccac taacagcacc
720
atagaaagag aagtgcagc acccagggcc acgaccctca gtggagctct ggtcacagtt
780
agcaggaatc ccctggaaga aacctcagcc ctctctgttg agacaccaag ttacgtcaaa
840
gtctcaggag cagctccggt ctccatagag gctgggtcag cagtgggcaa aacaacttcc
900

```

tttgctggga gctctgcttc ctcctacagc ccctcggaag cgcctctcaa gaacttcacc
 960
 ccttcagaga caccgaccat ggacatcgca accaaggggc ctttccccac cagcagggac
 1020
 cctcttcctt ctgtccctcc gactacaacc aacagcagcc gagggacgaa cagcacctta
 1080
 gccaagatca caacctcagc gaagaccacg atgaagcccc caacagccac gcccacgact
 1140
 gctcggacga ggccgaccac agacgtgagt gcaggtgaaa atggagggttc ctcctcctgc
 1200
 ggctgagtgt ggcttccccg gaagacctca ctgaccccag agtggcagaa aggctgatgc
 1260
 agcagctcca ccgggaactc cagccccacg cgcctcactt ccaggctctcc ttactgcgtg
 1320
 tcaggagagg ctaacggaca tcagctgcag ccaggcatgt cccgtatgcc aaaagagggt
 1380
 gctgccccta gcctggggccc ccaccgacag actgcagctg cgttactgtg ctgagaggta
 1440
 cccagaaggt tcccatgaag ggcagcatgt ccaagcccct gaccccagat gtggcaacag
 1500
 gaccctcgct cacatccacc ggagtgtatg tgtggggagg ggcttcacct gttcccagag
 1560
 gtgtccttgg actcaccttg gcacatgttc tgtgtttcag taaagagaga cctgatcacc
 1620
 catctgtgtg cttccatcct gcattaaaat tcaactcagtg tggcccagaa aaaaaa
 1676

<210> 2856

<211> 401

<212> PRT

<213> Homo sapiens

<400> 2856

Leu	Thr	Thr	Ser	Pro	Asn	Phe	Met	Val	Leu	Ile	Ala	Thr	Ser	Val	Glu
1				5				10						15	
Thr	Ser	Ala	Ala	Ser	Gly	Ser	Pro	Glu	Gly	Ala	Arg	Met	Thr	Thr	Val
		20						25					30		
Gln	Thr	Ile	Thr	Gly	Ser	Asp	Pro	Glu	Glu	Ala	Ile	Phe	Asp	Thr	Leu
		35					40					45			
Cys	Thr	Asp	Asp	Ser	Ser	Glu	Glu	Ala	Lys	Thr	Leu	Thr	Met	Asp	Ile
	50					55					60				
Leu	Thr	Leu	Ala	His	Thr	Ser	Thr	Glu	Ala	Lys	Gly	Leu	Ser	Ser	Glu
65					70					75					80
Ser	Ser	Ala	Ser	Ser	Asp	Gly	Pro	His	Pro	Val	Ile	Thr	Pro	Ser	Arg
			85					90						95	
Ala	Ser	Glu	Ser	Ser	Ala	Ser	Ser	Asp	Gly	Pro	His	Pro	Val	Ile	Thr
		100						105					110		
Pro	Ser	Arg	Ala	Ser	Glu	Ser	Ser	Ala	Ser	Ser	Asp	Gly	Pro	His	Pro
		115					120					125			
Val	Ile	Thr	Pro	Ser	Trp	Ser	Pro	Gly	Ser	Asp	Val	Thr	Leu	Leu	Ala
	130					135					140				
Glu	Ala	Leu	Val	Thr	Val	Thr	Asn	Ile	Glu	Val	Ile	Asn	Cys	Ser	Ile
145					150					155					160
Thr	Glu	Ile	Glu	Thr	Thr	Thr	Ser	Ser	Ile	Pro	Gly	Ala	Ser	Asp	Thr

```
<210> 2857
<211> 1668
<212> DNA
<213> Homo sapiens
```

```
<400> 2857
ctggttg gga gttggtaggg tgcgaccggg acagcccga agagttcgtt tggggctggg
60
ggctgggcgg gaggaggtga ctcggtttc tgtgtaaact tggccgcggg tgccgcagga
120
aggctagcca gagggtaatt acacaggtgt aggcggcgcg ggcgggcgga gggctcggga
180
ggcgcgagggg actggaagag ttggctgcgc ccaggcacca ggtggaagaa tttccatacc
240
agccctgcgg aggtgcctct gtttccagag gcgtttttgt acgaagggca ttttgaaagc
300
gaagcagaag ccgtagaatc agcggcgagc ctgttgaaag aaccacagg tgcatttcac
360
agcactctgg gcgaaaattg gatgtgaaaa tgaagccaga ccgagatact ctggatgaat
420
attttgaata tgatgcagag gagttcttgg tctctttggc cttgctgata acagaaggac
480
```

gaacacctga atgttctgta aaaggctgaa cagaaagctt tcattgccct ccagcacagt
 540
 cttgttacct agtaactacc aaacatgaat gtagtgacaa gctggcccag tgccgccaaag
 600
 ccagacgaac taggtctgag gtcacattgt tgtggaagaa taaccttcca atcatggtgg
 660
 aaatgatgct actaccagac tgctgctaca gcgatgatgg gccaccaca gaggggaattg
 720
 atctaaatga tcctgcgatt aagcaagatg cattattatt agaaagatgg atcttggagc
 780
 cagttcctcg acagaatggg gaccgattta ttgaagagaa gacgcttctg ttggctgtcc
 840
 gctcatttgt gtttttttct cagttaagtg catggctgag tgtttctcat ggtgctattc
 900
 cacgaaatat tctctacaga atcagtgtcg ctgatgtaga cctacagtgg aatttttcac
 960
 agactccaat tgagcatgtg tttcctgttc ccaatgtttc tcacaatgtt gccttgaaag
 1020
 tcagtgggtca atccctggcc caaacaatct aattatccag ttttgacgtg cagtattcac
 1080
 actaatattg gcctttatga gaaaagaatt caacaacata aacttaaaac tcatcagcac
 1140
 cataacccaa atgaagcaga acaatgtggg acaaacagtt cacagcgtct gtgtagcaaa
 1200
 caaacttggg ccatggcacc tgaaagtgtg ttacatgcaa aaagtggccc aagtccagaa
 1260
 tatactgcag ctgtcaaaaa tatcaaacta tatccaggca ctggcagtaa atctgaccat
 1320
 gggacatctc aagccaatat tctaggcttt agtgggtatag gtgatataaa atcacaagaa
 1380
 acatcagtga gaactttaaa atcattttca atgggttgatt ccagtatctc taaccgccag
 1440
 agtttctggc agtcagctgg tgagactaac cttttaatag gctctttaat tcaggagcgg
 1500
 caagaaatca ttgcaagaat tgctcaacat ttgattcatt gtgatccaag cacttcacat
 1560
 gtttctggac gtccatttaa tactcaagag tctagttcac tccattcaaa acttttccgg
 1620
 gtttcacaag aaaatgagaa cgtggggaaa aggtaaagaa gctttctc
 1668

<210> 2858

<211> 220

<212> PRT

<213> Homo sapiens

<400> 2858

Met	Lys	Pro	Asp	Arg	Asp	Thr	Leu	Asp	Glu	Tyr	Phe	Glu	Tyr	Asp	Ala
1				5				10						15	
Glu	Glu	Phe	Leu	Val	Ser	Leu	Ala	Leu	Leu	Ile	Thr	Glu	Gly	Arg	Thr
			20					25						30	
Pro	Glu	Cys	Ser	Val	Lys	Gly	Arg	Thr	Glu	Ser	Phe	His	Cys	Pro	Pro
		35					40					45			
Ala	Gln	Ser	Cys	Tyr	Pro	Val	Thr	Thr	Lys	His	Glu	Cys	Ser	Asp	Lys

50		55		60
Leu Ala Gln Cys Arg	Gln Ala Arg Arg Thr Arg	Ser Glu Val Thr Leu		
65	70	75	80	
Leu Trp Lys Asn Asn	Leu Pro Ile Met Val Glu Met Met	Leu Leu Pro		
	85	90	95	
Asp Cys Cys Tyr Ser	Asp Asp Gly Pro Thr Thr	Glu Gly Ile Asp Leu		
	100	105	110	
Asn Asp Pro Ala Ile	Lys Gln Asp Ala Leu Leu Leu	Glu Arg Trp Ile		
	115	120	125	
Leu Glu Pro Val Pro	Arg Gln Asn Gly Asp Arg Phe Ile	Glu Glu Lys		
	130	135	140	
Thr Leu Leu Leu Ala	Val Arg Ser Phe Val Phe Ser	Gln Leu Ser		
	145	150	155	160
Ala Trp Leu Ser Val	Ser His Gly Ala Ile Pro Arg	Asn Ile Leu Tyr		
	165	170	175	
Arg Ile Ser Ala Ala	Asp Val Asp Leu Gln Trp Asn Phe	Ser Gln Thr		
	180	185	190	
Pro Ile Glu His Val	Phe Pro Val Pro Asn Val Ser His	Asn Val Ala		
	195	200	205	
Leu Lys Val Ser Gly	Gln Ser Leu Ala Gln Thr Ile			
	210	215	220	

<210> 2859

<211> 1029

<212> DNA

<213> Homo sapiens

<400> 2859

```

ntgcagaagg aaattgcact cgtctcctcc gcgcccccg gacccaacac aatgcaccag
60
ccgcctgagt ccaccgccgc ggccgccgcc gctgcagaca ttagcgctag gaagatggcg
120
caccggcaa tgttccctcg aaggggcagc ggtagtggca gcgcctctgc tctcaatgca
180
gcaggtaccg gcgtcggtag taatgccaca tcttccgagg attttccgcc tccgtcgctg
240
cttcagccgc cgccccctgc agcatcttct acgtcgggac cacagcctcc gcctccacaa
300
agcctgaacc tcctttcgca ggctcagctg caggcacagc ctcttgcgcc aggcggaact
360
caaatgaaaa agaaaagtgg cttccagata actagcgta ctcctgctca gatctccgct
420
agtatcagct ctaacaacag tatagcagag gacactgaga gctatgatga tctggatgaa
480
tctcacacgg aagatctctc ttcttcggag atccttgatg tgtcactttc cagggctact
540
gacttagggg agcccgaacg cagctcctca gaagagaccc taaataactt ccaggaagcc
600
gagacacctg gggcagtcct tcccaaccag cccaccttc ctcagcctca tttgcctcac
660
cttcacacac agaatgttgt gatcaatggg aatgctcatc cacaccacct ccatcaccac
720
catcagattc atcatgggca ccacctccaa catggtcacc accatccatc tcatgttgct
780

```

```
<210> 2860
<211> 343
<212> PRT
<213> Homo sapiens
```

2098

290		295		300
Ser Val Met Thr Asn Met Arg Ala Pro Ser Thr Thr Gly Gly Ile Gly				
305		310		315
Ile Asn Ser Val Thr Gly Thr Ser Thr Val Asn Asn Val Asn Ile Thr				
	325		330	335
Ala Val Gly Ser Phe Asn Ser				
340				

<210> 2861
 <211> 756
 <212> DNA
 <213> Homo sapiens

<400> 2861
 gctagctcta gctctgcacc agcccaagaa accatctgcc tcgacgactc actagatgaa
 60
 gacctttctt tccattcacc ttcactggat cttgtttctg aagcttttagc gggtatcaac
 120
 aatgggaaca agggccctcc agttgggtca aggataagca tgccaaccac aaagcctcgt
 180
 ccaggactga gagaagaaaa attagcaagt atcatgagta agctgccact agctactccc
 240
 aaaaaactag attctactca gactacacat tcttcaagtc ttattgctgg tcacacaggg
 300
 ccagtaccaa agaaacccca ggatttagct catactggca tctcttcagg ccttattgct
 360
 ggttcttcca ttcagaacct taaagtttct ttagaacctt tgccagccag gctacttcaa
 420
 caaggacttc agaggtcaag ccagattcac acttcttctt cttcacagac ccatgtctcc
 480
 tcttcttccc aagcccaaat tgctgcctct tctcatgctc tgggaacatc cgaggcccaa
 540
 gatgcttctt cgtaaacaca agtaacaaag gtgcaccagc attcagctgt ccagcagaac
 600
 tatgtgtctc cattacaggc caccatcagt aaatcccaga ccaaccccgt cgtgaagtta
 660
 agtaataatc cccaactctc ctgttctctc tcacttatta agacttcaga taagccactt
 720
 atgtaccgcc ttcccttatt taccctcttc acgcgt
 756

<210> 2862
 <211> 252
 <212> PRT
 <213> Homo sapiens

<400> 2862
 Ala Ser Ser Ser Ser Ala Pro Ala Gln Glu Thr Ile Cys Leu Asp Asp
 1 5 10 15
 Ser Leu Asp Glu Asp Leu Ser Phe His Ser Pro Ser Leu Asp Leu Val
 20 25 30
 Ser Glu Ala Leu Ala Val Ile Asn Asn Gly Asn Lys Gly Pro Pro Val
 35 40 45
 Gly Ser Arg Ile Ser Met Pro Thr Thr Lys Pro Arg Pro Gly Leu Arg

50		55		60	
Glu Glu Lys Leu Ala Ser Ile Met Ser Lys Leu Pro Leu Ala Thr Pro					
65		70		75	80
Lys Lys Leu Asp Ser Thr Gln Thr Thr His Ser Ser Ser Leu Ile Ala					
	85		90		95
Gly His Thr Gly Pro Val Pro Lys Lys Pro Gln Asp Leu Ala His Thr					
	100		105		110
Gly Ile Ser Ser Gly Leu Ile Ala Gly Ser Ser Ile Gln Asn Pro Lys					
	115		120		125
Val Ser Leu Glu Pro Leu Pro Ala Arg Leu Leu Gln Gln Gly Leu Gln					
	130		135		140
Arg Ser Ser Gln Ile His Thr Ser Ser Ser Ser Gln Thr His Val Ser					
145		150		155	160
Ser Ser Ser Gln Ala Gln Ile Ala Ala Ser Ser His Ala Leu Gly Thr					
	165		170		175
Ser Glu Ala Gln Asp Ala Ser Ser Leu Thr Gln Val Thr Lys Val His					
	180		185		190
Gln His Ser Ala Val Gln Gln Asn Tyr Val Ser Pro Leu Gln Ala Thr					
	195		200		205
Ile Ser Lys Ser Gln Thr Asn Pro Val Val Lys Leu Ser Asn Asn Pro					
	210		215		220
Gln Leu Ser Cys Ser Ser Ser Leu Ile Lys Thr Ser Asp Lys Pro Leu					
225		230		235	240
Met Tyr Arg Leu Pro Leu Ser Thr Pro Phe Thr Arg					
	245		250		

<210> 2863

<211> 711

<212> DNA

<213> Homo sapiens

<400> 2863

naccgacgtc gaatatccat gcagcgcgct ccgggagctg cacgngctg cgtggaaaga
 60
 gcgccgagcg gtggcgctcg tgctgcccc tctcgtcgg gaagaatcgt ttggtctcct
 120
 gccgtgcccc gaatcccagt cagaagttcc agcctgccac tggtctctga tgccatgcc
 180
 gcaccaactc aactgttttt tctctcctc cgtaactgtg aactgagcag gatctatggc
 240
 actgcatgtt actgccacca caaacatctc tgttggtcct catcgtacat tctcagagt
 300
 cgactgagat acacacctca tccagcatat gctacctttt gcaggccaaa ggagaactgg
 360
 tggcagtaca cccaaggaag gagatatgct tccacaccac agaaatttta cctcacacct
 420
 ccacaagtca atagcatcct taaagctaata gaatacagtt tcaaagtgcc agaatttgac
 480
 ggcaaaaatg tcagttctat ccttggtattt gacagcaatc agctgcctgc aaatgcaccc
 540
 attgaggacc ggagaagtgc agcaacctgc ttgcagacca gagggatgct tttgggggtt
 600
 tttgatggcc atgcagggtg tgcttggtcc caggcagtca gtgaaagact cttttattat
 660

attgctgtct ctttggtacc ccatgagact ttgctagaga ttgaaaatgc a
711

<210> 2864

<211> 237

<212> PRT

<213> Homo sapiens

<400> 2864

Xaa	Arg	Arg	Arg	Ile	Ser	Met	Gln	Arg	Ala	Pro	Gly	Ala	Ala	Arg	Xaa
1				5					10					15	
Cys	Val	Glu	Arg	Ala	Pro	Ser	Gly	Gly	Val	Val	Val	Ala	Pro	Ser	Ser
		20						25					30		
Ser	Gly	Arg	Ile	Val	Trp	Ser	Pro	Ala	Val	Pro	Gly	Ile	Pro	Val	Arg
		35					40					45			
Ser	Ser	Ser	Leu	Pro	Leu	Phe	Ser	Asp	Ala	Met	Pro	Ala	Pro	Thr	Gln
		50				55					60				
Leu	Phe	Phe	Pro	Leu	Ile	Arg	Asn	Cys	Glu	Leu	Ser	Arg	Ile	Tyr	Gly
65					70					75				80	
Thr	Ala	Cys	Tyr	Cys	His	His	Lys	His	Leu	Cys	Cys	Ser	Ser	Ser	Tyr
				85					90					95	
Ile	Pro	Gln	Ser	Arg	Leu	Arg	Tyr	Thr	Pro	His	Pro	Ala	Tyr	Ala	Thr
			100					105					110		
Phe	Cys	Arg	Pro	Lys	Glu	Asn	Trp	Trp	Gln	Tyr	Thr	Gln	Gly	Arg	Arg
		115					120					125			
Tyr	Ala	Ser	Thr	Pro	Gln	Lys	Phe	Tyr	Leu	Thr	Pro	Pro	Gln	Val	Asn
		130				135					140				
Ser	Ile	Leu	Lys	Ala	Asn	Glu	Tyr	Ser	Phe	Lys	Val	Pro	Glu	Phe	Asp
145					150					155					160
Gly	Lys	Asn	Val	Ser	Ser	Ile	Leu	Gly	Phe	Asp	Ser	Asn	Gln	Leu	Pro
				165					170					175	
Ala	Asn	Ala	Pro	Ile	Glu	Asp	Arg	Arg	Ser	Ala	Ala	Thr	Cys	Leu	Gln
			180					185					190		
Thr	Arg	Gly	Met	Leu	Leu	Gly	Val	Phe	Asp	Gly	His	Ala	Gly	Cys	Ala
		195					200					205			
Cys	Ser	Gln	Ala	Val	Ser	Glu	Arg	Leu	Phe	Tyr	Tyr	Ile	Ala	Val	Ser
		210				215					220				
Leu	Leu	Pro	His	Glu	Thr	Leu	Leu	Glu	Ile	Glu	Asn	Ala			
225					230					235					

<210> 2865

<211> 585

<212> DNA

<213> Homo sapiens

<400> 2865

nggataccttc caaggtatcc aggtaaccgc cacagtttgg aatagagatg ttaggagaga
60
agaagtagta gaagacaaag acagttcttt aaattcttga gaagtatgag ctctgtgtat
120
ctgcagtgtgta aagttttgat atgtgatagc agtgaccacc agtctcgctg caatcaaggt
180
tgtgtctcca gaagcaaacg agacatttct tcatataaat ggaaaacaga ttccatcata
240

ggacccattc gtctgaaaag ggatcgaagt gcaagtggca attcaggatt tcagcatgaa
 300
 acacatgcgg aagaaactcc aaaccagcct ttcaacagtg tgcattctgtt ttccttcatg
 360
 gttcttagctc tgaatgtggt gactgtagcg acaatcacag tgaggcattt tgtaaataca
 420
 cgggcagact acaaatacca gaagctgcag aactattaac taacagggtcc aaccctaagt
 480
 gagacatgtt tctccaggat gccaaaggaa atgctacctc gtggctacac atattatgaa
 540
 taaatgagga agggcctgaa agtggcacac aggcctgcaa aaaaa
 585

<210> 2866
 <211> 134
 <212> PRT
 <213> Homo sapiens

<400> 2866
 Glu Arg Arg Ser Ser Arg Arg Gln Arg Gln Phe Phe Lys Phe Leu Arg
 1 5 10 15
 Ser Met Ser Ser Val Tyr Leu Gln Cys Lys Val Leu Ile Cys Asp Ser
 20 25 30
 Ser Asp His Gln Ser Arg Cys Asn Gln Gly Cys Val Ser Arg Ser Lys
 35 40 45
 Arg Asp Ile Ser Ser Tyr Lys Trp Lys Thr Asp Ser Ile Ile Gly Pro
 50 55 60
 Ile Arg Leu Lys Arg Asp Arg Ser Ala Ser Gly Asn Ser Gly Phe Gln
 65 70 75 80
 His Glu Thr His Ala Glu Glu Thr Pro Asn Gln Pro Phe Asn Ser Val
 85 90 95
 His Leu Phe Ser Phe Met Val Leu Ala Leu Asn Val Val Thr Val Ala
 100 105 110
 Thr Ile Thr Val Arg His Phe Val Asn Gln Arg Ala Asp Tyr Lys Tyr
 115 120 125
 Gln Lys Leu Gln Asn Tyr
 130

<210> 2867
 <211> 444
 <212> DNA
 <213> Homo sapiens

<400> 2867
 atgctgttca gcctcaagta cctgggcatg acgctagtgg agcagcccaa ggggtgaggag
 60
 ctgtcggccg ccgccatcaa gaggatcgtg gctacagcta aggccagtgg gaagaagctg
 120
 cagaaggtga ctctgaaggt gtcgccacgg ggaattatcc ttcattcagg ccatcatcca
 180
 gctcccagac aacctgctg ccaactcaagg cttgtggccg cggcacctcg tccatgttgg
 240
 tgggtgttggc gctgaccgtg gacagcgggg ccttagccgt ctctctaag tccagcaggt
 300

tcccagtggc gaccaagctc ttcaaggggg ggggtgcagtc ttggcggggc cccaggacgt
 360
 cccctccctc ttggctggct ttgtccctct tctctttctc ttccttggac acctgccaaa
 420
 actcaaaggc gactttgaag gcct
 444

<210> 2868

<211> 84

<212> PRT

<213> Homo sapiens

<400> 2868

Met	Leu	Phe	Ser	Leu	Lys	Tyr	Leu	Gly	Met	Thr	Leu	Val	Glu	Gln	Pro
1				5				10					15		
Lys	Gly	Glu	Glu	Leu	Ser	Ala	Ala	Ala	Ile	Lys	Arg	Ile	Val	Ala	Thr
			20					25					30		
Ala	Lys	Ala	Ser	Gly	Lys	Lys	Leu	Gln	Lys	Val	Thr	Leu	Lys	Val	Ser
		35					40					45			
Pro	Arg	Gly	Ile	Ile	Leu	His	Pro	Gly	His	His	Pro	Ala	Pro	Arg	Gln
	50					55					60				
His	Cys	Cys	His	Ser	Arg	Leu	Val	Ala	Ala	Ala	Pro	Arg	Pro	Cys	Trp
65					70					75					80
Trp	Cys	Trp	Arg												

<210> 2869

<211> 5811

<212> DNA

<213> Homo sapiens

<400> 2869

ntcacatcac catgacaacc ccctgccctt tctccattcc tacagcccaa ctatggaaac
 60
 cagcaatatg gaccaaacag ccagttcccc acccagccag gccagtaccc taccaccaac
 120
 cccccaaggc cactcacctc ccccaactac ccaggacaaa ggatgcccag ccaaccacagc
 180
 tccggacagt acccaccccc cacagtcaac atggggcagc attacaagcc agaacagttt
 240
 aatggacaaa ataacacggt ctcgggaagc agctacagta actacagcca agggaaatgtc
 300
 aacaggcctc ccaggccggt tcctgtggca aattaccccc actcacctgt tccagggaac
 360
 cccacacccc ccattgacccc tgggagcagc atccctccat acctgtcccc cagccaagac
 420
 gtcaaaccac ccttcccgcc tgacatcaag ccaaatatga gcgctctgcc accaccccca
 480
 gccaaaccaca atgacgagct gcggctcaca ttccctgtgc gggatggcgt ggtgctggag
 540
 cccttccgcc tggagcacia cctggctgta agcaaccatg tgttccagct gcgagactca
 600
 gtctacaaga cctgataat gaggcctgac ctggagctgc aattcaagtg ctaccaccac
 660

gaggaccggc agatgaacac caactggccc gcctcgggtgc aggtcagcgt gaacgccacg
720
ccgctcacca tcgagcgagg cgacaacaag acctcccaca agcccctgca cctgaagcac
780
gtgtgccagc caggccgcaa caccatccag atcaccgta cggcctgctg ctgtctccac
840
ctcttcgtgc tgcagctagt gcaccggccc tccgtccgct ctgtgctgca aggactctc
900
aagaagcgcc tcctgcccgc agagcactgt atcacgaaa tcaagcggaa tttcagcagc
960
gtggctgcct cctcgggcaa cagcaccctc aacggggagg atgggggtgga gcagacggcc
1020
atcaagggtg ctctgaagtg ccccatcaca ttccggcgca tccagctgcc tgcctgagga
1080
cacgattgca agcatgtgca gtgctttgat ctggagtcac acctgcagct gaattgcgag
1140
agagggacct ggaggtgtcc tgtgtgcaat aaaaccgctc tgctggaggg cctggaggtg
1200
gatcagtaca tgtggggaat cctgaatgcc atccaacact ccgagtttga agaggtcacc
1260
atcgatccca cgtgcagctg gcggccgggtg cccatcaagt cggacttaca catcaaggat
1320
gacctgatg gcatcccctc caagcgggtc aagaccatga gtcccagcca gatgatcatg
1380
cccaatgtca tggagatgat cgcagccctg ggccccggcc cgtcccccta tccccctccg
1440
cctccccag ggggcaccaa ctccaacgac tacagcagcc aaggcaacaa ctaccaaggc
1500
catggcaact ttgacttccc ccacgggaac cctggaggga catccatgaa tgacttcag
1560
cacgggcccc ccagctctc ccaccccccg gacatgcccc acaacatggc cgcctcag
1620
aaacccctca gccaccccat gcaggaaact atgccacacg ctggcagctc tgaccagccc
1680
caccctcca tacaacaagg tttgcacgta ccacacccca gcagccagtc agggcctcca
1740
ttacatcaca gtgggggtcc tcctctctc ccttcccagc ctccccggca gccgccacag
1800
gccgtccca gcagccatcc acacagcgac ctgaccttta accctctctc agccttagag
1860
ggtcaggccg gagcgaggg agcgtccgac atgccggagc ctctgctgga tctccttccc
1920
gaactcacia atcctgacga gctcctgtct tatctggacc cccccgacct gccgagcaat
1980
agtaacgatg acctcctgtc tctatttgag aacaactgag ggccaccggg tcggggccat
2040
cctccacac tctgcatcct accccacctt cccaacacac ttttccacct gggagcctgt
2100
gccctcagac cgccccgcac cagagccacg ggctgtgggg cggggagccc tccccgctg
2160
cagccctctc agaacagagg ggtagggagg gtgcaccagt gcaccaggaa ggctgtgtgg
2220
gtctggagcc caggtccac ctccacaccc ttggcttggg cccatgcccc gcgcaggcct
2280

gaagaccacc ctcccgagag gaaccagccc ggtaagaggg cacacgctga tgcggcttcc
2340
cggteccctcc gcgtgtgccc attccagatg accttccagt gtccccaagg ttcttccatc
2400
ttctagactg taaccctgcc tccctgcttc ctgggtccaga gcctccctcc agtgactgtg
2460
gagcctgaga aggcccccg gccccagcat gggccccgag ccttggagga gcactggcag
2520
ttggtggcag tgagaccagc ccaccacca ccaccacca cagaaaagca caaacctctg
2580
ggaaagacaa cgtctctcgg gggccagggg tcatcggttt gacccctgac ctataagcca
2640
agatacccca taaacacact cagaaagcag agaaaaagga caagagtctg tgtttgagag
2700
ggggtctgcc attcctgctt ggggactggg ggggaagagg gccaggacat cttctgagcc
2760
aggacgtccc tgaggctcca cctccaagct cagacagggc ccaggcttgg ggaacagaga
2820
gagcaggtgt acaccacaacc aaagtgattg tgcccttggg tggggggcgc gggcatataa
2880
cctgtcagaa gcaaacagga gcggcaactt ctaactttgc tccaagccac tctcttttta
2940
aacagcaaca atttaaagct atgaagtcac ctggagaaaa ggaacgttgc tcttggacag
3000
caagcaaacc atttctctcc gtctgttctg tttttctcct agtccctctc ctgccacctc
3060
tccaagaactt ccgtgggaca cccacttccc tctgtcctag ttctctttgt ccaatcagat
3120
ggcaagggca gtgcgtggaa aggccgggga ggtgcagaaa ccagagccca gggcaatggg
3180
gtctgtccag cccctccctc tgtccctgtg ctccaagctg cccccggctg cagcccaggc
3240
catggacatg tgcaccagta tgtacctgca ggcattgggg ggaggggggc gtgtttctgg
3300
gcctgcccc a gacactgccc ttggctgcca gcctaccctg cctgcaactc tccaccatca
3360
caatctcacc caaactcctg ctcactcaag caaaagcagc ctctggcctt ccctccaccg
3420
ctttgtccca tctggcttac cactctccag ggctcctgg ggagcctgtc ctgtgttcac
3480
tttgtttcag gctgggtctgt gccccgtgag ccacatggcc taggggtgatg ccaggttgtc
3540
ccgtcactgg ggtcccatct gtaaattctt tgcgccttc ccggtgctg cctggggccc
3600
tttctgctc tcccgtccgc tgtgggtggg cccagcact cctctgtggg ttttaccgga
3660
aagggtggccc cagctgttga cttccagtca ctgtcccaga cggcacaagg ttttctgtag
3720
gaaagctgcc attgccccgg ccccttttct tcctttgtcc cgttgtcgag gttttttcaa
3780
atagcgtgtt gttcagtatg caaatcaatt attttaagaa tcgcttttgt aaatatctt
3840
gtgaatatatt tagtatcgtc tttgataata ttcaacattt tcatgacctg gttatagcct
3900

ttgctgggtgt ttttaaaata cctggactca atgacaaaga ccgagtcttc ttttttttaa
3960
acaaaaacaa aaaaagcaac cagggctatt tgtacagttg aaggggtgaa cagaatgggc
4020
ggctgtgctg ggagttggaa gaccgggcag cccgctatct agagccatcc ctgagtcagc
4080
tggcagggac aagccaacgc caggtagcat gtggccaccc ttgcccagtg tctgtggcct
4140
ggcaagtggc cagccctgt gtcagaccat ctgggaatta agctccagac agacttacag
4200
atgccttctc taggagttct tgcctcttgc gttgatactt tgccccagaa aggcctggga
4260
ttcattctgg ttcttatcag ggtgtgtcca cactctgctc acaggtggat ccacggcttt
4320
ccagtgcgga gagtcgagat gctccctgca gccagggccc cgggcacctc ctgcaaccat
4380
ctctgggctc agcacctgag gggggtttcc tgggtccctc ctccagcaag cctccaccag
4440
caagctcggc ccagagcttc ccttcgggct ggctctgaac cgtgcgtggt gcctacagcc
4500
tgcagtctgg agacaagctc ttccggagtg ctctgggagc caggccaggg tgtgagggag
4560
gtgcagaggc atccggggcg ggagcaagcc ccaggttgtg acaggtgcag gtagacaacg
4620
cccataaaca gagatggtcc tgaactctgg agagatcctt ccctgatcct ttcggacgac
4680
tacttggagc cataagtaac ctgagcaaaa acgaggcctc tgcaagccac ttttccatgc
4740
caagcatcca cccggccac aggcattgtt ctgccgccac tccgcaagat ggacagggag
4800
ccagcaggca ggcgggaagg gccaaagtaca ggcaatcacc cccatcttct tggtttgaag
4860
ctttatccat gtatcatgtt ccgtgtagcc attttatttt ttaagaaact gctaatactt
4920
tctcccta at ggaagccctg atccccaga gagctacagg tctgctcccg acgggcctcg
4980
ggcctgaccc gtccacacag ggccgtgtca acagcagcga ctcaaggagc gtgtgtacat
5040
atgtaaata gaaatagaga cgtgtcaaca gatgcattca tttctcttgg aatgtgtatt
5100
gtttttattt tgcgaaacaa aacaaaacaa aaaaaaaagc ttggaactcc atcacgtgga
5160
aaaactagat cctgttggtt atagcatctg tgagttctcc acgtctgtct ctctcgtca
5220
tgtaataata tctgacctg agtggaaagg ggtttttgtt ctgtttttat ttacctaca
5280
tgtactattt agcttcagtg tactagtcct gccacctgtg tatttttagg gtgctatgga
5340
aataatgaaa agaaacgggg atttcagaag aaaattgtaa ccaaattcat actttgtata
5400
atttttgata tcatgatcac aggtgattca cacgtacaca cataaacaca cccaccagtg
5460
cagcctgaag taactccac agaaaccatc atcgtctttg tacatcgtat gtacaatgca
5520

atcatttcat actttaaaact ggtcaaaaaa ctaattgtga tttctagtct tgcaaagctg
 5580
 tatgtagtta gatgatgtga caacctctaa tatttatcta ataaatatgt attcagatga
 5640
 aacctgtata ttaggtgttc atgtgggttat tttgtattta aagatcaa at tatttgacta
 5700
 ttgctagaca tttctatact ctgttgtaac actgaggtat ctcatttgcc catgttaatt
 5760
 tttttctaaa taaattgaca aaaacaaaaa aaaaaaaaaa aagggcggcc g
 5811

<210> 2870

<211> 258

<212> PRT

<213> Homo sapiens

<400> 2870

Glu	Phe	Glu	Glu	Val	Thr	Ile	Asp	Pro	Thr	Cys	Ser	Trp	Arg	Pro	Val
1				5					10					15	
Pro	Ile	Lys	Ser	Asp	Leu	His	Ile	Lys	Asp	Asp	Pro	Asp	Gly	Ile	Pro
			20					25					30		
Ser	Lys	Arg	Phe	Lys	Thr	Met	Ser	Pro	Ser	Gln	Met	Ile	Met	Pro	Asn
		35					40					45			
Val	Met	Glu	Met	Ile	Ala	Ala	Leu	Gly	Pro	Gly	Pro	Ser	Pro	Tyr	Pro
	50					55					60				
Leu	Pro	Pro	Pro	Pro	Gly	Gly	Thr	Asn	Ser	Asn	Asp	Tyr	Ser	Ser	Gln
65					70					75					80
Gly	Asn	Asn	Tyr	Gln	Gly	His	Gly	Asn	Phe	Asp	Phe	Pro	His	Gly	Asn
				85				90						95	
Pro	Gly	Gly	Thr	Ser	Met	Asn	Asp	Phe	Met	His	Gly	Pro	Pro	Gln	Leu
			100					105						110	
Ser	His	Pro	Pro	Asp	Met	Pro	Asn	Asn	Met	Ala	Ala	Leu	Glu	Lys	Pro
		115					120						125		
Leu	Ser	His	Pro	Met	Gln	Glu	Thr	Met	Pro	His	Ala	Gly	Ser	Ser	Asp
	130					135					140				
Gln	Pro	His	Pro	Ser	Ile	Gln	Gln	Gly	Leu	His	Val	Pro	His	Pro	Ser
145					150					155					160
Ser	Gln	Ser	Gly	Pro	Pro	Leu	His	His	Ser	Gly	Ala	Pro	Pro	Pro	Pro
				165					170					175	
Pro	Ser	Gln	Pro	Pro	Arg	Gln	Pro	Pro	Gln	Ala	Ala	Pro	Ser	Ser	His
		180					185						190		
Pro	His	Ser	Asp	Leu	Thr	Phe	Asn	Pro	Ser	Ser	Ala	Leu	Glu	Gly	Gln
	195						200					205			
Ala	Gly	Ala	Gln	Gly	Ala	Ser	Asp	Met	Pro	Glu	Pro	Ser	Leu	Asp	Leu
	210					215					220				
Leu	Pro	Glu	Leu	Thr	Asn	Pro	Asp	Glu	Leu	Leu	Ser	Tyr	Leu	Asp	Pro
225					230					235					240
Pro	Asp	Leu	Pro	Ser	Asn	Ser	Asn	Asp	Asp	Leu	Leu	Ser	Leu	Phe	Glu
				245					250					255	

Asn Asn

<210> 2871

<211> 786

<212> DNA

<213> Homo sapiens

<400> 2871

```

ggtaccatga cccgttgcag ccatcagcag tctccctatc agcttctgtt tggggaaccc
60
tacatctttg aagaacttct gggcttgaag atccgcatct ctccagatgc ctttttccag
120
attaacactg ctggtgcaga gatgctgtat tggactgtag gggagctgac tggagtgaac
180
tctgacacca tccttcttga catctgctgt ggaactgggtg tgattggcct ccctctggct
240
cagcatacat ctcgggtcct tgggattgaa ttgttggagc aggcagtgga ggatgcaaga
300ccttcaatgg catcaccaac tctgaatttc atactggtca agcagagaag 360
attttgccag ggctgctaaa gtcaaaggaa gatggacagt caattgttgc tgtggtgaac
420
ccagcccgtg ccggactgcg taaggatgaa cagctatctt gatgttccca gtattgtcca
480
tcaacttttg ttcttctttt ccacaccatg ctacgggtgc tcccagtggg ctggctctga
540
acctgtttcc cctctatctt taatcaatcc tgagtctctg tcagttggaa gtttgtgata
600
acagagacca tggtagttaa ttatactaag agcaagggtg ttcttccttc agattacaag
660
gtgattcaag ccattcgaaa cttcagggcc atccacacgc tagtttttgt ttcttgcaag
720
ctccatgggtg aatccactag gaatgtcatt gagctgtgct gtcctccaga ccctgccttg
780
gcgcgc
786

```

<210> 2872

<211> 153

<212> PRT

<213> Homo sapiens

<400> 2872

```

Gly Thr Met Thr Arg Cys Ser His Gln Gln Ser Pro Tyr Gln Leu Leu
1      5      10      15
Phe Gly Glu Pro Tyr Ile Phe Glu Glu Leu Leu Gly Leu Lys Ile Arg
20     25     30
Ile Ser Pro Asp Ala Phe Phe Gln Ile Asn Thr Ala Gly Ala Glu Met
35     40     45
Leu Tyr Trp Thr Val Gly Glu Leu Thr Gly Val Asn Ser Asp Thr Ile
50     55     60
Leu Leu Asp Ile Cys Cys Gly Thr Gly Val Ile Gly Leu Pro Leu Ala
65     70     75     80
Gln His Thr Ser Arg Val Leu Gly Ile Glu Leu Leu Glu Gln Ala Val
85     90     95
Glu Asp Ala Arg Trp Thr Ala Ala Phe Asn Gly Ile Thr Asn Ser Glu
100    105    110
Phe His Thr Gly Gln Ala Glu Lys Ile Leu Pro Gly Leu Leu Lys Ser
115    120    125
Lys Glu Asp Gly Gln Ser Ile Val Ala Val Val Asn Pro Ala Arg Ala

```

130 135 140
Gly Leu Arg Lys Asp Glu Gln Leu Phe
145 150

<210> 2873
<211> 1187
<212> DNA
<213> Homo sapiens

<400> 2873
nccgactgga tcggccagag ttactccgag gtgatgagcc tcaacgagca ctccatgcag
60
gcgctgtect ggcgcaagct ctacttgagc cgcgccaagc ttaaagcctc cagccggacc
120
tcggctctgc tctccggctt cgccatggtg gcaatggtgg aggtgcagct ggacgctgac
180
cacgactacc caccggggct gctcatcgcc ttcagtgcct gcaccacagt gctggtggct
240
gggcacctgt ttgcgctcat gatcagcacc tgcatacctgc ccaacatcga ggcggtgagc
300
aactgcacaa tctcaactcg gaaggagtcc ccccatgagc gcatgcaccg ccacatcgag
360
ctggcctggg ccttctccac cgtcatcggc acgctgctct tcctagctga ggtggtgctg
420
ctctgctggg tcaagttctt gcccctcaag aagcagccag gccagccaag gccaccagc
480
aagccccccg ccagtggcgc agcagccaac gtcagcacca gcggcatcac cccgggccag
540
gcagctgcca tcgcctcgac caccatcatg gtgcccttcg gcctgatctt tatcgtcttc
600
gccgtccact tctaccgctc actggttagc cataagactg accgacagtt ccaggagctc
660
aacgagctgg cggagtttgc ccgcttacag gaccagctgg accacagagg ggaccacccc
720
ctgacgcccg gcagccacta tgcctaggcc catgtggtct gggcccttcc agtgctttgg
780
ccttacgccc tcccccttga ccttgctctg cccagcctc acggacagcc tgcgcagggg
840
gctgggcttc agcaaggggc agagcgtgga gggaagagga tttttataag agaaatttct
900
gcactttgaa actgtcctct aagagaataa gcatttcctg ttcttccagc tccaggtcca
960
cctcctgttg ggaggcggtg gggggccaaa gtggggccac aactcgtctg tgtccccctc
1020
cctccccctg gccagtgcc cctgggtgcc tcctcctgtc ctgtccgtct caacctccct
1080
cccgtccagc attgagtgtg tacatgtgtg tgtgacacat aaatatactc ataaggacac
1140
ctccaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaa
1187

<210> 2874
<211> 248
<212> PRT

<213> Homo sapiens

<400> 2874

```

Xaa Asp Trp Ile Gly Gln Ser Tyr Ser Glu Val Met Ser Leu Asn Glu
 1           5           10           15
His Ser Met Gln Ala Leu Ser Trp Arg Lys Leu Tyr Leu Ser Arg Ala
      20           25           30
Lys Leu Lys Ala Ser Ser Arg Thr Ser Ala Leu Leu Ser Gly Phe Ala
      35           40           45
Met Val Ala Met Val Glu Val Gln Leu Asp Ala Asp His Asp Tyr Pro
      50           55           60
Pro Gly Leu Leu Ile Ala Phe Ser Ala Cys Thr Thr Val Leu Val Ala
      65           70           75           80
Gly His Leu Phe Ala Leu Met Ile Ser Thr Cys Ile Leu Pro Asn Ile
      85           90           95
Glu Ala Val Ser Asn Cys Thr Ile Ser Thr Arg Lys Glu Ser Pro His
      100          105          110
Glu Arg Met His Arg His Ile Glu Leu Ala Trp Ala Phe Ser Thr Val
      115          120          125
Ile Gly Thr Leu Leu Phe Leu Ala Glu Val Val Leu Leu Cys Trp Val
      130          135          140
Lys Phe Leu Pro Leu Lys Lys Gln Pro Gly Gln Pro Arg Pro Thr Ser
      145          150          155          160
Lys Pro Pro Ala Ser Gly Ala Ala Ala Asn Val Ser Thr Ser Gly Ile
      165          170          175
Thr Pro Gly Gln Ala Ala Ala Ile Ala Ser Thr Thr Ile Met Val Pro
      180          185          190
Phe Gly Leu Ile Phe Ile Val Phe Ala Val His Phe Tyr Arg Ser Leu
      195          200          205
Val Ser His Lys Thr Asp Arg Gln Phe Gln Glu Leu Asn Glu Leu Ala
      210          215          220
Glu Phe Ala Arg Leu Gln Asp Gln Leu Asp His Arg Gly Asp His Pro
      225          230          235          240
Leu Thr Pro Gly Ser His Tyr Ala
      245

```

<210> 2875

<211> 593

<212> DNA

<213> Homo sapiens

<400> 2875

```

nntccagcct ctctccgacc gcgtcggact ggtctgtctg agggagatgg tgacaagctc
60
aaggcctgcg aggtctcaaa aaataaagat ggaaaagaac aaagtgaac tgtatcactg
120
tctgaagatg aaacattctc ctggccaggt cccaaaacag ttacgttgaa aagaacatct
180
caaggctttg gttttacatt aagacatttt attgtttatc cccagagtc tgcaattcaa
240
ttttcatata aggatgaaga aaatggaaac agaggaggaa aacaaagaaa ccgcttgga
300
ccaatggata ccatatttgt taagcaagtt aaagaaggag gacctgcttt tgaagctgga
360

```

ttatgtacag gtgaccgaat tataaaagtc aatggagaaa gtgttattgg caaaacctat
 420
 tcccaagtaa ttgctttaat tcaaaacagt gataacaacat tggaacttag tgttatgcc
 480
 aaagatgaag acattctcca agtggttaagt tttatttatt catatatgag ttgttttaca
 540
 gtcatgaatg ttcggaaaat atttttgaga tggaagtatt aaagatggaa ttc
 593

<210> 2876
 <211> 193
 <212> PRT
 <213> Homo sapiens

<400> 2876
 Xaa Pro Ala Ser Leu Arg Pro Arg Arg Thr Gly Leu Ser Glu Gly Asp
 1 5 10 15
 Gly Asp Lys Leu Lys Ala Cys Glu Val Ser Lys Asn Lys Asp Gly Lys
 20 25 30
 Glu Gln Ser Glu Thr Val Ser Leu Ser Glu Asp Glu Thr Phe Ser Trp
 35 40 45
 Pro Gly Pro Lys Thr Val Thr Leu Lys Arg Thr Ser Gln Gly Phe Gly
 50 55 60
 Phe Thr Leu Arg His Phe Ile Val Tyr Pro Pro Glu Ser Ala Ile Gln
 65 70 75 80
 Phe Ser Tyr Lys Asp Glu Glu Asn Gly Asn Arg Gly Gly Lys Gln Arg
 85 90 95
 Asn Arg Leu Glu Pro Met Asp Thr Ile Phe Val Lys Gln Val Lys Glu
 100 105 110
 Gly Gly Pro Ala Phe Glu Ala Gly Leu Cys Thr Gly Asp Arg Ile Ile
 115 120 125
 Lys Val Asn Gly Glu Ser Val Ile Gly Lys Thr Tyr Ser Gln Val Ile
 130 135 140
 Ala Leu Ile Gln Asn Ser Asp Thr Thr Leu Glu Leu Ser Val Met Pro
 145 150 155 160
 Lys Asp Glu Asp Ile Leu Gln Val Val Ser Phe Ile Tyr Ser Tyr Met
 165 170 175
 Ser Cys Phe Thr Val Met Asn Val Arg Lys Ile Phe Leu Arg Trp Lys
 180 185 190
 Tyr

<210> 2877
 <211> 1921
 <212> DNA
 <213> Homo sapiens

<400> 2877
 ngctgatgct gccgtgcggt acttgatcatg gagctggcac tgcggcgctc tcccgtccc
 60
 cgggtggttgc tgctgctgcc gctgctgctg ggctgaacg caggagctgt cattgactgg
 120
 cccacagagg agggcaagga agtatgggat tatgtgacgg tccgcaagga tgcctacatg
 180

ttctgggtggc tctattatgc caccactcct gcaagaactt cagaactgcc cctgggtcatg
240
tggtttcagg gcgggtccagg cggttctagc actggatttg gaaactttga ggaaattggg
300
ccccttgaca gtgatctcaa accacggaaa accacctggc tccaggctgc cagtctccta
360
tttgtggata atcccgtggg cactgggttc agttatgtga atggtagtgg tgcctatgcc
420
aaggacctgg ctatgggtggc ttcagacatg atggttctcc tgaagacctt cttcagttgc
480
caciaagaat tccagacagt tccattctac attttctcag agtcctatgg aggaaaaatg
540
gcagctggca ttgggtctaga gctttataag gccattcagc gagggaccat caagtgcac
600
tttgcggggg ttgccttggg tgattcctgg atctccctg ttgattcggg gctctcctgg
660
ggaccttacc tgtacagcat gtctcttctc gaagacaaag gtctggcaga ggtgtctaag
720
gttcagagc aagtactgaa tgccgtaaat aaggggctct acagagaggc cacagagctg
780
tgggggaaaag cagaaatgat cattgaacag aacacagatg ggggtgaactt ctataacatc
840
ttaactaaaa gcactccac gtctacaatg gagtcgagtc tagaattcac acagagccac
900
ctagtttgc tctgtcagcg ccacgtgaga cacctacaac gagacgcctt aagccagctc
960
atgaatggcc ccatcagaaa gaagctcaaa attattcctg aggatcaatc ctggggaggc
1020
caggctacca acgtctttgt gaacatggag gaggacttca tgaagccagt catcgacatt
1080
gtggatacgt tgctggaggc aggggtcaat gtgactgtgt ataatgggca gctggatctc
1140
attgtggaca ccataggtca ggaggcctgg gtgcggaaac tgaagtggcc agaactgtcc
1200
agattcaatc agctgaagtg gaaggccctg tacagtgacc ctaaatcttt ggaaacatct
1260
gcttttgc tca agtcctacaa gaaccttgct ttctactgga ttctgaaagc tggatcatg
1320
gttccttctg accaagggga catggctctg aagatgatga gactgggtgac tcagcaagaa
1380
taggatggat ggggctggag atgagctggg ttggccttgg ggcacagagc tgagctgagg
1440
ccgctgaagc ttaggaagc gccattcttc cctgtatcta actggggctg tgatcaagaa
1500
gggtctgacc agcttctgca gaggataaaa tcattgtctc tggaggcaat ttggaaatta
1560
tttctgcttc ttaaaaaaac ctaagatttt ttaaaaaatt gatttgtttt gatcaaaata
1620
aaggatgata atagatatta ttttttctta tgacagaagc aaatgatgtg atttatagaa
1680
aaactgggaa atacaggtac ccaaagagta aatcaacatc tgtatacccc cttcccaggg
1740
gtaagcactg ttaccaatth agcatatgtc cttgcagaat ttttttttct atatatacat
1800

atatatatttt taccaaaatg aatcattact ctatgttggt ttactatttg tttgacatat
 1860
 cagtatatct gaaacacctt ttcatgtcaa taaatgttct tctctaacat ttaaaaaaaaa
 1920
 a
 1921

<210> 2878
 <211> 451
 <212> PRT
 <213> Homo sapiens

<400> 2878
 Met Glu Leu Ala Leu Arg Arg Ser Pro Val Pro Arg Trp Leu Leu Leu
 1 5 10 15
 Leu Pro Leu Leu Leu Gly Leu Asn Ala Gly Ala Val Ile Asp Trp Pro
 20 25 30
 Thr Glu Glu Gly Lys Glu Val Trp Asp Tyr Val Thr Val Arg Lys Asp
 35 40 45
 Ala Tyr Met Phe Trp Trp Leu Tyr Tyr Ala Thr Thr Pro Ala Arg Thr
 50 55 60
 Ser Glu Leu Pro Leu Val Met Trp Leu Gln Gly Gly Pro Gly Gly Ser
 65 70 75 80
 Ser Thr Gly Phe Gly Asn Phe Glu Glu Ile Gly Pro Leu Asp Ser Asp
 85 90 95
 Leu Lys Pro Arg Lys Thr Thr Trp Leu Gln Ala Ala Ser Leu Leu Phe
 100 105 110
 Val Asp Asn Pro Val Gly Thr Gly Phe Ser Tyr Val Asn Gly Ser Gly
 115 120 125
 Ala Tyr Ala Lys Asp Leu Ala Met Val Ala Ser Asp Met Met Val Leu
 130 135 140
 Leu Lys Thr Phe Phe Ser Cys His Lys Glu Phe Gln Thr Val Pro Phe
 145 150 155 160
 Tyr Ile Phe Ser Glu Ser Tyr Gly Gly Lys Met Ala Ala Gly Ile Gly
 165 170 175
 Leu Glu Leu Tyr Lys Ala Ile Gln Arg Gly Thr Ile Lys Cys Asn Phe
 180 185 190
 Ala Gly Val Ala Leu Gly Asp Ser Trp Ile Ser Pro Val Asp Ser Val
 195 200 205
 Leu Ser Trp Gly Pro Tyr Leu Tyr Ser Met Ser Leu Leu Glu Asp Lys
 210 215 220
 Gly Leu Ala Glu Val Ser Lys Val Ala Glu Gln Val Leu Asn Ala Val
 225 230 235 240
 Asn Lys Gly Leu Tyr Arg Glu Ala Thr Glu Leu Trp Gly Lys Ala Glu
 245 250 255
 Met Ile Ile Glu Gln Asn Thr Asp Gly Val Asn Phe Tyr Asn Ile Leu
 260 265 270
 Thr Lys Ser Thr Pro Thr Ser Thr Met Glu Ser Ser Leu Glu Phe Thr
 275 280 285
 Gln Ser His Leu Val Cys Leu Cys Gln Arg His Val Arg His Leu Gln
 290 295 300
 Arg Asp Ala Leu Ser Gln Leu Met Asn Gly Pro Ile Arg Lys Lys Leu
 305 310 315 320
 Lys Ile Ile Pro Glu Asp Gln Ser Trp Gly Gly Gln Ala Thr Asn Val

```
<210> 2879
<211> 1352
<212> DNA
<213> Homo sapiens
```

2114

gcecgcccc tcttccccag cacaggtgcc gcccatcctg cctccaaccc atttgaccc
 960
 tcagcccatc ctggcagctt cctgcccact ggccccctga cagacccttt cagcagaccg
 1020
 agcacctttg ggggcctggg cagcctgagc agccacgcct ttgggggcct gggcagccat
 1080
 gcactggctc ccggtggcag catctttgcc cccaaggagg gctcctccgt gctcggcctg
 1140
 cccagcccc atgaggcctg gagccgactg caccgggccc cgccatcctt cccggctccg
 1200
 cccccgtggc ccaagtccgt ggacgaggag cgggtgtcag ccctgaccaa ccatgaccga
 1260
 gagccggtca atggcaagga ggagcaggaa cgggacctcc tggagaagac gcgcctgctg
 1320
 agccgggcct cgcccgccac ccccgctggc ca
 1352

<210> 2880

<211> 376

<212> PRT

<213> Homo sapiens

<400> 2880

Met	Gly	Pro	Gly	Cys	Trp	Pro	Ala	Gly	Gly	Trp	Thr	Leu	Ala	Pro	Gly	1	5	10	15
Glu	Gly	Leu	Thr	Val	Phe	Ser	Leu	Ala	Ser	Arg	Cys	Gln	Pro	Gly	Gly	20	25	30	
Leu	Ile	Gln	Pro	Ala	Asn	His	Val	Leu	Pro	Ala	Ser	Phe	Gly	Asn	Ser	35	40	45	
Asp	Trp	Tyr	Leu	Val	Thr	Gly	Ser	Ser	Leu	Thr	Cys	Thr	Pro	Gly	Pro	50	55	60	
Ala	Arg	Gly	Glu	Arg	Pro	Pro	Arg	Leu	Gly	Leu	Pro	Thr	Pro	Gly	Val	65	70	75	80
Pro	Val	Xaa	Asp	Lys	Tyr	Ala	Pro	Lys	Leu	Asp	Ser	Pro	Tyr	Phe	Arg	85	90	95	
His	Ser	Ser	Val	Ser	Phe	Phe	Pro	Ser	Phe	Pro	Pro	Ala	Ile	Pro	Gly	100	105	110	
Leu	Pro	Thr	Leu	Leu	Pro	His	Pro	Gly	Pro	Phe	Gly	Ser	Leu	Gln	Gly	115	120	125	
Ala	Phe	Gln	Pro	Lys	Thr	Ser	Ser	Pro	Ile	Glu	Val	Ala	Arg	Arg	Ala	130	135	140	
Gly	Ala	Val	His	Thr	Leu	Leu	Gln	Lys	Ala	Pro	Gly	Val	Ser	Asp	Pro	145	150	155	160
Tyr	Arg	Ala	Val	Val	Lys	Lys	Pro	Gly	Arg	Trp	Cys	Ala	Val	His	Val	165	170	175	
Gln	Ile	Ala	Trp	Gln	Ile	Tyr	Arg	His	Gln	Gln	Lys	Ile	Lys	Glu	Met	180	185	190	
Gln	Leu	Asp	Pro	His	Lys	Leu	Glu	Val	Gly	Ala	Lys	Leu	Asp	Leu	Phe	195	200	205	
Gly	Arg	Pro	Pro	Ala	Pro	Gly	Val	Phe	Ala	Gly	Phe	His	Tyr	Pro	Gln	210	215	220	
Asp	Leu	Ala	Arg	Pro	Leu	Phe	Pro	Ser	Thr	Gly	Ala	Ala	His	Pro	Ala	225	230	235	240
Ser	Asn	Pro	Phe	Gly	Pro	Ser	Ala	His	Pro	Gly	Ser	Phe	Leu	Pro	Thr				

gtgaaaatta tggcctttgc cggcactggg aagacctcaa cgctgggtcaa gtatgcagag
960
aagtgggtctc agagcagggt tctgtatgtg acattcaaca agagcatcgc aaagcaggcc
1020
gaacgcgtct tccccagcaa cgtcatctgc aaaaccttcc actccatggc ctacgggcac
1080
atagggcgga agtaccagtc aaagaagaag ttgaatctct tcaagttaac acccttcatg
1140
gtcaactccg tccttgctga aggggaagggt ggattcataa gagccaagct tgtgtgtaag
1200
actctagaaa acttctttgc ctcggtgac gaagagctga ccattgatca cgtgcctatt
1260
tgggtgtaaga acagccaagg acagagagtc atgggtgagc agagtgaaaa actgaatggc
1320
gtccttgaag cgagccgcct ctgggataac atgcggaagc tgggggagtg cacagaagag
1380
gcgcaccaga tgactcatga cggctacttg aaactctggc agctgagcaa gccttcgctg
1440
gcctcttttg acgccatctt tgtggatgag gccaggact gcacaccagc tatcatgaac
1500
atagttctgt ctacgccatg tgggaaaatc tttgtagggg acccgcacca gcagatctat
1560
accttccggg gtgcgggtcaa cgccctgttc acagtgcccc acaccacgt cttctatctc
1620
acgcagagtt ttcggtttgg tgtggaaata gcttatgtgg gagctactat cttggatgtt
1680
tgcaagagag tcaggaaaaa gactttgggt ggaggaaacc atcagagtgg cattagaggt
1740
gacgcaaagg ggcaagtggc cttgttgctc cggaccaacg ccaacgtgtt tgatgaggcc
1800
gtacgggtga cggaagggga attcccttca aggatacatt tgattggggg gattaaatca
1860
tttggattgg acagaatcat tgatatattg atccttcttc agccagagga agaacggagg
1920
aaacaaaacc tcgtcattaa agacaaattt atcagaagat ggggtgcacaa agaaggcttt
1980
agtggcttca agaggtatgt gaccgtgcc gaggacaagg agcttgaagc caagatcgca
2040
gttgttgaaa agtataacat caggattcca gagctgggtg aaaggataga aaaatgccat
2100
atagaagatt tggactttgc agagtacatt ctgggcactg tgcacaaagc caaaggcctg
2160
gagtttgaca ctgtgcatgt tttggatgat tttgtgaaag tgccttgtgc ccggcataac
2220
ctgccccagc ttccgcactt cagagttgag tcattttctg aggatgaatg gaatttactg
2280
tatgttcag taactcgagc caagaagcgt ctcatcatga ccaaatcatt ggaaaacatt
2340
ttgactttgg ctggggagta cttcttgcaa gcagagctga caagcaacgt cttaaaaaca
2400
ggcgtgggtg gctgctgcgt gggacagtgc aacaatgcca tccctgttga caccgtcctt
2460
accatgaaga agctgccccat cacctatagc aacaggaagg aaaacaaggg gggctacctc
2520

tgccactcct gtgcggagca gcgcacgagg cccctggcgt tcctgacagc ctccccggag
 2580
 caggtgcgcg ccatggagcg cactgtggag aacatcgtag tgccccggca tgaggccctg
 2640
 ctcttcctcg tcttctgagg acaaggcgca cgttctccgc agtgcagagc agcttgccga
 2700
 ggacccccg cg tgaagaaagc cagcgagggg ggcttctgct cctgagact ctgggttcac
 2760
 ccacagcact ttctgaggaa gaggacacca gcccaagctg gacctgcat ttctccactc
 2820
 cctacagaca gccagtctcc acttgccctcc cctctggatg tatctggatc gggaagtggg
 2880
 ggatgttctt ttgataaaaa aaaaaaaaaa ttttatgtat ttaaactttt attacaagat
 2940
 ttcaattaaa caggcaccat agcactggca aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 3000
 aaaaaaaaaa aaaaaaaaaa a
 3021

<210> 2882
 <211> 96
 <212> PRT
 <213> Homo sapiens

<400> 2882
 Gly Gln Gly Ala Arg Ser Pro Gln Cys Arg Ala Ala Cys Arg Gly Pro
 1 5 10 15
 Arg Val Lys Lys Ala Ser Glu Gly Gly Phe Cys Ser Leu Arg Leu Trp
 20 25 30
 Val His Pro Gln His Phe Leu Arg Lys Arg Thr Pro Ala Gln Ala Gly
 35 40 45
 Pro Ala Ile Ser Pro Leu Pro Thr Asp Ser Gln Ser Pro Leu Ala Ser
 50 55 60
 Pro Leu Asp Val Ser Gly Gln Gly Ser Gly Gly Cys Ser Phe Asp Lys
 65 70 75 80
 Lys Lys Lys Lys Phe Tyr Val Phe Lys Leu Leu Leu Gln Asp Phe Asn
 85 90 95

<210> 2883
 <211> 516
 <212> DNA
 <213> Homo sapiens

<400> 2883
 gagaaggagg acaggggtga gtactcccc gcacttgccc tgcccagcct ccggggctgc
 60
 taccacgagg ggccggctgg tgggtcgggc gcggcaccga gcagtgtgga cacgtacccg
 120
 tacgggctgc ccacacctcc tgaaatgtct cccctggacg tgctggagcc ggagcagacc
 180
 ttcttctcct ccccttgcca ggaggagcat ggccatcccc gccgcacccc ccacctgcca
 240
 gggcacccgt actcaccgga gtacgcccc agccctctcc actgtagcca cccctggggc
 300

tccctggccc ttggccagtc ccccggegtc tccatgatgt cccctgtacc cggctgtccc
 360
 ccatctcctg cctattactc cccggccacc taccacccac tccactccaa cctccaagcc
 420
 cacctggggc agctttcccc gcctcctgag caccctggct tcgacgcctt ggatcaactg
 480
 aaccagggtg aactcctggg ggacatggat cgcaat
 516

<210> 2884

<211> 172

<212> PRT

<213> Homo sapiens

<400> 2884

Glu	Lys	Glu	Asp	Arg	Gly	Glu	Tyr	Ser	Pro	Ala	Leu	Ala	Leu	Pro	Ser
1				5					10					15	
Leu	Arg	Gly	Cys	Tyr	His	Glu	Gly	Pro	Ala	Gly	Gly	Ala	Ala	Ala	Ala
			20					25					30		
Pro	Ser	Ser	Val	Asp	Thr	Tyr	Pro	Tyr	Gly	Leu	Pro	Thr	Pro	Pro	Glu
			35					40				45			
Met	Ser	Pro	Leu	Asp	Val	Leu	Glu	Pro	Glu	Gln	Thr	Phe	Phe	Ser	Ser
			50				55				60				
Pro	Cys	Gln	Glu	Glu	His	Gly	His	Pro	Arg	Arg	Ile	Pro	His	Leu	Pro
65					70				75					80	
Gly	His	Pro	Tyr	Ser	Pro	Glu	Tyr	Ala	Pro	Ser	Pro	Leu	His	Cys	Ser
			85					90						95	
His	Pro	Leu	Gly	Ser	Leu	Ala	Leu	Gly	Gln	Ser	Pro	Gly	Val	Ser	Met
			100					105					110		
Met	Ser	Pro	Val	Pro	Gly	Cys	Pro	Pro	Ser	Pro	Ala	Tyr	Tyr	Ser	Pro
			115				120					125			
Ala	Thr	Tyr	His	Pro	Leu	His	Ser	Asn	Leu	Gln	Ala	His	Leu	Gly	Gln
			130				135					140			
Leu	Ser	Pro	Pro	Pro	Glu	His	Pro	Gly	Phe	Asp	Ala	Leu	Asp	Gln	Leu
145					150				155					160	
Asn	Gln	Gly	Glu	Leu	Leu	Gly	Asp	Met	Asp	Arg	Asn				
				165				170							

<210> 2885

<211> 807

<212> DNA

<213> Homo sapiens

<400> 2885

aagcttcagg gcattgggca tttcangaat accattcgag aaatgttttc tcagttcgca
 60
 gagtttgatg atgaactgga tagcatggct ccagtgggga gagatgcaga aacattgcaa
 120
 aagcaaaagg aaactataaa agcctttcta aagaaactag aagccctcat agcaagcaat
 180
 gacaatgcca ataaaacctg caagatgatg ttagccacag aagaaacctc tcctgacctt
 240
 gttggaatca aaagggaactt ggaggcctta agcaaacaat gcaacaagtt actggaccga
 300

gcccaagcca gagaagagca ggttgaaggg acaattaagc gccttgaaga attttacagc
 360
 aaattgaaag aattttctat tctgctccag aaagccgaag aacatgaaga gtcacaaggt
 420
 cctgttggtta tggaaacgga gacaattaat cagcagctta acatgttcaa ggtattccag
 480
 aaagaagaga ttgaaccctt gcaaggtaaa cagcaagatg taaactgggt aggtcaaggc
 540
 cttattcaga gtgctgccaa aagcactagc actcagggct tggagcatga cctggatgat
 600
 gtcaatgcac ggtggaagac tctcaataag aaggtggctc agcgagcagc ccagctgcag
 660
 gaggccttgc tgcactgtgg gaggttccag gatgccctgg agtccctgct cagctggatg
 720
 gtggacactg aggagcttgt ggccaatcag aagcccccg cggctgagtt caaagtggta
 780
 aaggacaaga tacaagaaca aaagctt
 807

<210> 2886

<211> 269

<212> PRT

<213> Homo sapiens

<400> 2886

Lys	Leu	Gln	Gly	Ile	Gly	His	Phe	Xaa	Asn	Thr	Ile	Arg	Glu	Met	Phe
1				5					10					15	
Ser	Gln	Phe	Ala	Glu	Phe	Asp	Asp	Glu	Leu	Asp	Ser	Met	Ala	Pro	Val
			20					25					30		
Gly	Arg	Asp	Ala	Glu	Thr	Leu	Gln	Lys	Gln	Lys	Glu	Thr	Ile	Lys	Ala
			35				40					45			
Phe	Leu	Lys	Lys	Leu	Glu	Ala	Leu	Ile	Ala	Ser	Asn	Asp	Asn	Ala	Asn
	50					55					60				
Lys	Thr	Cys	Lys	Met	Met	Leu	Ala	Thr	Glu	Glu	Thr	Ser	Pro	Asp	Leu
65				70					75					80	
Val	Gly	Ile	Lys	Arg	Asp	Leu	Glu	Ala	Leu	Ser	Lys	Gln	Cys	Asn	Lys
			85					90					95		
Leu	Leu	Asp	Arg	Ala	Gln	Ala	Arg	Glu	Glu	Gln	Val	Glu	Gly	Thr	Ile
			100					105					110		
Lys	Arg	Leu	Glu	Glu	Phe	Tyr	Ser	Lys	Leu	Lys	Glu	Phe	Ser	Ile	Leu
			115				120					125			
Leu	Gln	Lys	Ala	Glu	Glu	His	Glu	Glu	Ser	Gln	Gly	Pro	Val	Gly	Met
			130			135					140				
Glu	Thr	Glu	Thr	Ile	Asn	Gln	Gln	Leu	Asn	Met	Phe	Lys	Val	Phe	Gln
145				150					155					160	
Lys	Glu	Glu	Ile	Glu	Pro	Leu	Gln	Gly	Lys	Gln	Gln	Asp	Val	Asn	Trp
			165					170						175	
Leu	Gly	Gln	Gly	Leu	Ile	Gln	Ser	Ala	Ala	Lys	Ser	Thr	Ser	Thr	Gln
			180				185					190			
Gly	Leu	Glu	His	Asp	Leu	Asp	Asp	Val	Asn	Ala	Arg	Trp	Lys	Thr	Leu
			195			200					205				
Asn	Lys	Lys	Val	Ala	Gln	Arg	Ala	Ala	Gln	Leu	Gln	Glu	Ala	Leu	Leu
			210			215					220				
His	Cys	Gly	Arg	Phe	Gln	Asp	Ala	Leu	Glu	Ser	Leu	Leu	Ser	Trp	Met

225		230		235		240									
Val	Asp	Thr	Glu	Glu	Leu	Val	Ala	Asn	Gln	Lys	Pro	Pro	Ser	Ala	Glu
			245						250					255	
Phe	Lys	Val	Val	Lys	Asp	Lys	Ile	Gln	Glu	Gln	Lys	Leu			
			260					265							

<210> 2887

<211> 1945

<212> DNA

<213> Homo sapiens

<400> 2887

```

nngggggctg tttaaagatg gcggcggagg aacctcagca gcagaagcag gagccgctgg
60
gcagcgactc cgaagggtgtt aactgtcttg cctatgatga agccatcatg gctcagcagg
120
accgaattca gcaagagatt gctgtgcaga acctcttggt gtcagagcgg ctggagctct
180
cggtcctata caaggagtat gctgaagatg acaacatcta tcaacagaag atcaaggacc
240
tccacaaaaa gtactcgtac atccgcaaga ccaggcctga cggcaactgt ttctatcggg
300
ctttcggatt ctcccacttg gaggcactgc tggatgacag caaggagttg cagcggtgag
360
aagggtgggc actgggcacc gaggcaggtg ggtgtctacc tcctccccgg gcgagtagga
420
tgtgtctcga gtaggggtgc tccctccttc ccgggcgatg ggctggactc tggccttgcc
480
aggcggggca gtgctgtctc ggccctggcg tctgggctgg tcgaggagcc catgctgggc
540
ccgcctttcc atcccacccc caggttcaag gctgtgtctg ccaagagcaa ggaagacctg
600
gtgtcccagg gcttactga attcacaatt gaggatttcc acaacacgtt catggacctg
660
attgagcagg tggagaagca gacctctgtc gccgacctgc tggcctcctt caatgaccag
720
agcacctccg actaccttgt ggtctacctg cggctgctca cctcgggcta cctgcagcgc
780
gagagcaagt tcttcgagca cttcatcgag ggtggacgga ctgtcaagga gttctgccag
840
caggaggtgg agcccatgtg caaggagagc gaccacatcc acatcattgc gctggcccag
900
gccctcagcg tgtccatcca ggtggagtac atggaccgcg gcgagggcgg caccaccaat
960
ccgcacatct tccctgaggg ctccgagccc aaggctctacc ttctctaccg gcctggacac
1020
tacgatatcc tctacaaata gggctggctc cagcccgtg ctgccctgct gccccctct
1080
gccaggcgct agacatgtac agaggttttt ctgtggttgt aaatggtcct atttcacccc
1140
cttcttctctg tcacatgacc ccccccatg ttttattaaa gggggtgctg gtggtgagcc
1200
gtgtgtgcgt gtcctgtctc tgetgcccgc ctggctgctc tgtctgctgc cccctcccc
1260

```

caggtgggtc cccctgcttt tcacctatct actcctgagc ttccccaaca ggagcaggtt
 1320
 tgaggggcca ggctcttgagg aggcctctcc tgccttggtg gggtctgctt ccttcccttc
 1380
 ttagctggct caggggcttc tatgggatcc tggaagtcc ttagggactt gcccagggtc
 1440
 ccagggccac ccacacttca tctgctccct cataggcccc acctccacgt cccggctggg
 1500
 cccagacccc cagcttcttg cctccaccg ggagtctgca tgggtgggag tcctgggtgg
 1560
 aggggccttt gtgaggctgg acccggtca gggcaggtgg aggagctggg cctccacag
 1620
 ggtgcccggg cagtgccatc ctgggtgggg agggcagcct tcaaactgtt ggggtctaca
 1680
 gtcctcaggt ctaggcaggg ctgccggttc tccacctccc catccgcccc agggcccttg
 1740
 cctgtgcttg ccttgacccc cctctgcttg ggccacggtg tctctgcatt gcctgccttt
 1800
 ttgccttcac ctcttttctt ccccgcccc tgcacattcg gggctctcagc cccaggtg
 1860
 tgagctcctt gggggcaggg cctcaataaa tgtgaactgc tgctgcctaa aaaaaaaaaa
 1920
 aaaaaaaaaa aaaaaaaaaa aaaaa
 1945

<210> 2888

<211> 315

<212> PRT

<213> Homo sapiens

<400> 2888

Met	Met	Lys	Pro	Ser	Trp	Leu	Ser	Arg	Thr	Glu	Phe	Ser	Lys	Arg	Leu
1				5					10					15	
Leu	Cys	Arg	Thr	Leu	Trp	Cys	Gln	Ser	Gly	Trp	Ser	Ser	Arg	Ser	Tyr
			20					25					30		
Thr	Arg	Ser	Met	Leu	Lys	Met	Thr	Thr	Ser	Ile	Asn	Arg	Arg	Ser	Arg
		35				40						45			
Thr	Ser	Thr	Lys	Ser	Thr	Arg	Thr	Ser	Ala	Arg	Pro	Gly	Leu	Thr	Ala
	50				55					60					
Thr	Val	Ser	Ile	Gly	Leu	Ser	Asp	Ser	Pro	Thr	Trp	Arg	His	Cys	Trp
65					70					75				80	
Met	Thr	Ala	Arg	Ser	Cys	Ser	Gly	Glu	Lys	Gly	Gly	His	Trp	Ala	Pro
			85						90					95	
Arg	Gln	Val	Gly	Val	Tyr	Leu	Leu	Pro	Gly	Arg	Val	Gly	Cys	Val	Ser
		100						105					110		
Ser	Arg	Val	Ser	Pro	Ser	Phe	Pro	Gly	Asp	Gly	Leu	Asp	Ser	Gly	Leu
		115				120					125				
Ala	Arg	Arg	Gly	Ser	Ala	Val	Ser	Ala	Leu	Ala	Ser	Gly	Leu	Val	Glu
	130				135					140					
Glu	Pro	Met	Leu	Gly	Pro	Pro	Phe	His	Pro	Thr	Pro	Arg	Phe	Lys	Ala
145				150						155				160	
Val	Ser	Ala	Lys	Ser	Lys	Glu	Asp	Leu	Val	Ser	Gln	Gly	Phe	Thr	Glu
			165					170						175	
Phe	Thr	Ile	Glu	Asp	Phe	His	Asn	Thr	Phe	Met	Asp	Leu	Ile	Glu	Gln

<400> 2890
Val His Leu Pro Glu Val Gln Leu Pro Lys Val Ser Glu Ile Arg Leu

```

1           5           10           15
Pro Glu Met Gln Val Xaa Glu Val Pro Asp Val His Leu Pro Lys Xaa
20           25           30
Pro Glu Val Lys Leu Pro Arg Ala Pro Glu Val Gln Leu Lys Ala Thr
35           40           45
Lys Ala Glu Gln Ala Glu Gly Met Glu Phe Gly Phe Lys Met Pro Lys
50           55           60
Met Thr Met Pro Lys Leu Gly Arg Ala Glu Ser Pro Ser Arg Gly Lys
65           70           75           80
Pro Gly Glu Ala Gly Ala Glu Val Ser Gly Lys Leu Val Thr Leu Pro
85           90           95
Cys Leu Gln Pro Glu Val Asp Gly Glu Ala His Val Gly Val Pro Ser
100          105          110
Leu Thr Leu Pro Ser Val Glu Leu Asp Leu Pro Gly Ala Leu Gly Leu
115          120          125
Gln Gly Gln Val Pro Ala Ala Lys Met Gly Lys Gly Glu Arg Ala Glu
130          135          140
Gly Pro Glu Val Ala Ala Gly Val Arg Glu Val Gly Phe Arg Val Pro
145          150          155          160
Ser Val Glu Ile Val Thr Pro Gln Leu Pro Ala Val Glu Ile Glu Glu
165          170          175
Gly Arg Leu Glu Met Ile Glu Thr Lys Val Lys Pro Ser Ser Lys Phe
180          185          190
Ser Leu Pro Lys Phe Gly Leu Ser Gly Pro Lys Val
195          200

```

<210> 2891
 <211> 565
 <212> DNA
 <213> Homo sapiens

```

<400> 2891
tttttttttt tttttttttt tttttttttt tttttttttt ccatgctccc actgggtttat
60
ttcaacccca aatattttcc aacagaagta gaaaacaggg catattaaac aaacaacaaa
120
ccaaccaacc aacaaaacta aaagtgatac tgacacagtt caggtgataa gcaggaaaat
180
gggattatca gacaccggct ctttggcaca cactgcgaag tcagcccctc tgcccagtct
240
ggaaaagcaa cggcgtaagt caatgtgatg aagagggtcca gcctctcgtc gggaacttgg
300
ccgcaaaatg ggtaatgctt ttctgtagga tgtggagtggt agctgggtgtt gcaatgggtgt
360
tttgctcagg gctcggcaca gacgtcctcc ggccttccac tgcgatgttg ctctttggtc
420
tcttaacaac atggggacga ggtgggcgca cctttccaaa gtggactgtg atttggccgc
480
cgttcttctc ggagcttggg gttccttgcc ctccaccagt ggggacggtg cagtctttgg
540
cagctgctct tctggggtgg gggcc
565

```

<210> 2892

<211> 90
 <212> PRT
 <213> Homo sapiens

<400> 2892
 Met Leu Leu Arg Asp Gln Arg Ala Thr Ser Gln Trp Lys Ala Gly Gly
 1 5 10 15
 Arg Leu Cys Arg Ala Leu Ser Lys Thr Pro Leu Gln His Gln Leu His
 20 25 30
 Ser Thr Ser Tyr Arg Lys Ala Leu Pro Ile Leu Arg Pro Ser Ser Arg
 35 40 45
 Arg Glu Ala Gly Pro Leu His His Ile Asp Leu Arg Arg Cys Phe Ser
 50 55 60
 Arg Leu Gly Arg Gly Ala Asp Phe Ala Val Cys Ala Lys Glu Pro Val
 65 70 75 80
 Ser Asp Asn Pro Ile Phe Leu Leu Ile Thr
 85 90

<210> 2893
 <211> 2270
 <212> DNA
 <213> Homo sapiens

<400> 2893
 cacaactcct caccattcc ctgccccctt ctggatacgc tgccctgttct ttctgtgcct
 60
 agccctgtcc aagctctatg agacctctct ctgacctcag tctgtttctg ctgtacctcc
 120
 tcaattctgg cctgtgctct tctagggaga ctagatgtat gcaccacca gaaactgcc
 180
 gtagggagca ccctacaggc atgacttggc agctaggcca tgtttatttc ccttgggtggg
 240
 gcacccgaca ggcagagttt attccctcag cttgggggtg gcagtgggtg tggtagtgct
 300
 aggggttact gcaggcaggt ttctgtttct ttgcatcccg ggactggctt gttctcacct
 360
 ttttgttctg tccctctctg gtgtatttac tttctctctt tttgcattgt tctcagcctt
 420
 ccattctcat ctcttcatct ctgcctctct tgccctgcatt tcctcaatct tgattgtccc
 480
 tgccctcttc tctgccattc cctctcttcc cctcagctct gtggctctgc ctccctgtct
 540
 cactctccct ataactggcc tctccctgcc cagaccttcc tggacgagct gcatgagaca
 600
 gggcagctgc actctatgtc cacctggatg gagctatatc cagcagtcag cactgatgtc
 660
 cgctttgcca acatgctggg ccagccgggc tccaccctc tggacttatt caagttctat
 720
 gtggaggagt tgaaggcacg attccatgat gaaaagaaga tcattaagga catccttaag
 780
 gaccggggct tctgcgtgga ggtgaacacg gcctttgagg acttcgcca cgtcataagc
 840
 tttgacaaga gggctgccgc actggacgca ggcaacatca agctgacctt caatagtctg
 900

ctggagaaaag cagaggcacg ggagagggag cgggagaagg aggaggcacg caggatgcgg
960
cgcaggggaag ctgcctttcg aagcatgctg aggcaggctg tgccctgctct ggagctaggc
1020
actgcctggg aagaggtccg tgagcgtttt gtgtgtgact cagcctttga gcagatcacc
1080
ctggagtcgg agcggatccg gctcttccgg gagttcctac aggtgctgga gactgaatgc
1140
cagcacctcc acaccaaagg ccgaaagcat ggcaggaaag gcaagaagca ccatcacaag
1200
cgttcccact caccctcagg ctctgagtca gaagaagagg agctgcccc accatctctc
1260
cggcccccca agcggaggag gcggaacccc tcagagtcag gctctgagcc ctcttcctca
1320
cttgattcag ttgaaagtgg ggggtgctgcc cttggaggac ggggctcccc ttcctcccat
1380
cttcttggag cagatcatgg ccttcggaag gccaagaaac caaaaaagaa aactaagaag
1440
agaagacaca agtcgaatag tcctgagagt gagacagacc ctgaggagaa agctggcaag
1500
gagagcgatg agaaagaaca agaacaggac aaggacaggg agctccaaca ggcagagctc
1560
cctaaccggt cccagggctt tggaatcaag aaggagaaga caggctggga cacgtcagaa
1620
agtgagctga gtgaggggtga gctggagagg cggcggcgga cactcctaca gcagctggat
1680
gatcaccagt gacccaatga gctgttctct gcctcggtc tgtgtgaggc catggctcct
1740
gggccaccct caccgtctgc ctgagacttc ttccttagtc tggctctgtgt ccacttttct
1800
taaagtaacc ccacccccag cacaccattg ttggcacctc tcaaggttgc tcttgggtgt
1860
caagggtccc ctactccctg gactagtgea gtccttgccc tcagccccag accagagatg
1920
ggtggtatat gccatgtggg gtgggtgatg ccagtagata aaagtgtgag agaaggggtc
1980
tccaggggaag agtcacaggc tgttggaagg agcctgggtg gcagagggca gggcatcac
2040
cctctagcat cagtgcctgc tcctgcctgc cctggccctg aggtccacc acttcttctc
2100
ccaccagga cctaattgtac gtgtgttttg tttttgttt ttttaataac aatatttata
2160
acatgaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
2220
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
2270

<210> 2894

<211> 490

<212> PRT

<213> Homo sapiens

<400> 2894

Met Phe Ile Ser Leu Gly Gly Ala Pro Asp Arg Gln Ser Leu Phe Pro

1		5		10		15									
Gln	Leu	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Ser	Ala	Arg	Gly	Tyr	Cys	Arg
		20					25						30		
Gln	Val	Ser	Val	Ser	Leu	His	Pro	Gly	Thr	Gly	Leu	Phe	Ser	Pro	Phe
		35					40					45			
Cys	Ser	Val	Pro	Leu	Trp	Cys	Ile	Tyr	Phe	Leu	Ser	Phe	Cys	Ile	Val
		50				55					60				
Leu	Ser	Leu	Pro	Ser	Ala	Ser	Leu	His	Leu	Cys	Leu	Ser	Cys	Leu	His
65					70					75					80
Phe	Leu	Asn	Leu	Asp	Cys	Pro	Cys	Leu	Phe	Leu	Cys	His	Ser	Leu	Ser
				85					90					95	
Ser	Pro	Ser	Val	Cys	Gly	Ser	Ala	Ser	Leu	Ser	His	Ser	Pro	Tyr	Asn
			100					105					110		
Trp	Pro	Leu	Pro	Ala	Gln	Thr	Phe	Leu	Asp	Glu	Leu	His	Glu	Thr	Gly
		115					120					125			
Gln	Leu	His	Ser	Met	Ser	Thr	Trp	Met	Glu	Leu	Tyr	Pro	Ala	Val	Ser
		130				135					140				
Thr	Asp	Val	Arg	Phe	Ala	Asn	Met	Leu	Gly	Gln	Pro	Gly	Ser	Thr	Pro
145					150					155					160
Leu	Asp	Leu	Phe	Lys	Phe	Tyr	Val	Glu	Glu	Leu	Lys	Ala	Arg	Phe	His
				165					170					175	
Asp	Glu	Lys	Lys	Ile	Ile	Lys	Asp	Ile	Leu	Lys	Asp	Arg	Gly	Phe	Cys
			180					185					190		
Val	Glu	Val	Asn	Thr	Ala	Phe	Glu	Asp	Phe	Ala	His	Val	Ile	Ser	Phe
		195					200					205			
Asp	Lys	Arg	Ala	Ala	Ala	Leu	Asp	Ala	Gly	Asn	Ile	Lys	Leu	Thr	Phe
		210				215					220				
Asn	Ser	Leu	Leu	Glu	Lys	Ala	Glu	Ala	Arg	Glu	Arg	Glu	Arg	Glu	Lys
225					230				235						240
Glu	Glu	Ala	Arg	Arg	Met	Arg	Arg	Arg	Glu	Ala	Ala	Phe	Arg	Ser	Met
				245					250					255	
Leu	Arg	Gln	Ala	Val	Pro	Ala	Leu	Glu	Leu	Gly	Thr	Ala	Trp	Glu	Glu
			260					265					270		
Val	Arg	Glu	Arg	Phe	Val	Cys	Asp	Ser	Ala	Phe	Glu	Gln	Ile	Thr	Leu
		275					280					285			
Glu	Ser	Glu	Arg	Ile	Arg	Leu	Phe	Arg	Glu	Phe	Leu	Gln	Val	Leu	Glu
		290				295					300				
Thr	Glu	Cys	Gln	His	Leu	His	Thr	Lys	Gly	Arg	Lys	His	Gly	Arg	Lys
305					310					315					320
Gly	Lys	Lys	His	His	His	Lys	Arg	Ser	His	Ser	Pro	Ser	Gly	Ser	Glu
				325					330					335	
Ser	Glu	Glu	Glu	Glu	Leu	Pro	Pro	Pro	Ser	Leu	Arg	Pro	Pro	Lys	Arg
			340					345					350		
Arg	Arg	Arg	Asn	Pro	Ser	Glu	Ser	Gly	Ser	Glu	Pro	Ser	Ser	Ser	Leu
		355					360					365			
Asp	Ser	Val	Glu	Ser	Gly	Gly	Ala	Ala	Leu	Gly	Gly	Arg	Gly	Ser	Pro
		370				375					380				
Ser	Ser	His	Leu	Leu	Gly	Ala	Asp	His	Gly	Leu	Arg	Lys	Ala	Lys	Lys
385					390					395					400
Pro	Lys	Lys	Lys	Thr	Lys	Lys	Arg	Arg	His	Lys	Ser	Asn	Ser	Pro	Glu
				405					410					415	
Ser	Glu	Thr	Asp	Pro	Glu	Glu	Lys	Ala	Gly	Lys	Glu	Ser	Asp	Glu	Lys
			420					425					430		
Glu	Gln	Glu	Gln	Asp	Lys	Asp	Arg	Glu	Leu	Gln	Gln	Ala	Glu	Leu	Pro

435 440 445
 Asn Arg Ser Pro Gly Phe Gly Ile Lys Lys Glu Lys Thr Gly Trp Asp
 450 455 460
 Thr Ser Glu Ser Glu Leu Ser Glu Gly Glu Leu Glu Arg Arg Arg Arg
 465 470 475 480
 Thr Leu Leu Gln Gln Leu Asp Asp His Gln
 485 490

<210> 2895
 <211> 697
 <212> DNA
 <213> Homo sapiens

<400> 2895
 nntctagatg taactgctat cgttgtcttt tctctcaagt gccgagagag aagcgctaac
 60
 ttctgctcca gcatcatctc cagcttctgg ccctgtttgg agatccagtg gtccactccg
 120
 tgcaggcggt agcacgtctc cagcatcaac ctgaagtccg ccacgaactc ggtgatgcc
 180
 ccgtactggc cgctggcgaa cttctcttcc atctgcagca gacacatgcc ctgtccgggc
 240
 tgctgcgga aggcgcgacc gcccgcgccc ccgctgcgcg gcccttctgc cactctctcc
 300
 tgccgcggtg gcaacgcccc ccaagggtg cagaaagggg gcggtgaggc cccggtgctt
 360
 ctctgcagg aactcgcccc ggatgcggta gcccctgctg tagctcgtag gtcagctcct
 420
 gtccttgca gcaaccgcct ccgatcccca tcgcctccat ctcttctctc tgatcgctccg
 480
 cgtcctccag cgaggaggca ctcttccgt gggccggccc tgaggctctg gccgccgctg
 540
 ccactctctc ctctgtctcc tctcttctgg ccgcgggtgg cgcccgctct tctctcccag
 600
 ccggtcccat cgctcccggc gtcccgggca cactcatgcc ccggcaggcc taggctgggg
 660
 ggtgtggaac agccgctcga ggtgctgggg gacgcgt
 697

<210> 2896
 <211> 174
 <212> PRT
 <213> Homo sapiens

<400> 2896
 Met Pro Pro Tyr Trp Pro Leu Ala Asn Phe Ser Ser Ile Cys Ser Arg
 1 5 10 15
 His Met Pro Cys Pro Gly Cys Cys Gly Lys Ala Arg Pro Pro Arg Pro
 20 25 30
 Pro Leu Arg Gly Pro Ser Ala Thr Ser Ser Cys Arg Gly Gly Asn Ala
 35 40 45
 Pro Gln Gly Leu Gln Lys Gly Gly Gly Glu Ala Pro Val Leu Leu Leu
 50 55 60
 Gln Glu Leu Ala Gln Asp Ala Val Ala Pro Ala Val Ala Arg Arg Ser

65					70					75					80
Ala	Pro	Ala	Pro	Cys	Ser	Asn	Arg	Leu	Arg	Ser	Pro	Ser	Pro	Pro	Ser
				85					90					95	
Leu	Pro	Pro	Asp	Arg	Pro	Arg	Pro	Pro	Ala	Arg	Arg	His	Ser	Phe	Arg
			100					105					110		
Gly	Pro	Ala	Leu	Arg	Ser	Gly	Pro	Pro	Leu	Pro	Pro	Pro	Pro	Arg	Arg
		115					120					125			
Pro	Leu	Leu	Arg	Pro	Pro	Val	Ala	Ala	Ala	Leu	Pro	Pro	Gln	Pro	Ala
	130					135					140				
Pro	Ser	Leu	Pro	Ala	Ser	Arg	Ala	His	Ser	Cys	Pro	Gly	Arg	Pro	Arg
145					150					155				160	
Leu	Gly	Gly	Val	Glu	Gln	Pro	Leu	Glu	Val	Leu	Gly	Asp	Ala		
			165					170							

<210> 2897

<211> 3184

<212> DNA

<213> Homo sapiens

<400> 2897

```

tttttttttt tttttttttt tttttttttt tttttttttt tttttgtagt tataatgttt
60
aatatggaat agatatttca tatctatatt tggaaaacac ataataggga aataactgcc
120
ctataattgt atgagaagaa taaaaacagt tccttttagaa ttcttattgt tttctctatt
180
ctttttcagg ctaagacaat gcatagcttt tggttgatac aggtaaccct gggttaccact
240
aaagggtgat ccccttcaga taataaaccc atttaactcc agtctcactc ccttcaccag
300
gagggcagct cacagtcagc ttggtggtga tggggggttt gctgccagat ggggttcctt
360
caaaggagac tgtgatgttg ttgatcttct tgggccgcac agactctcca gcgcgaatgg
420
tgaaggctgg gttatccacg atgatggaga aggtcaccat gtgatagaag acattcttga
480
aggggatgat tatgctgtac ccggctcgga tcgagaaggg accttggggc ttgggaggca
540
gagccattcc aaagaggggg atgatatact ctccacctgc gagcgatgat aggatcagga
600
tgcccttggc ctcacccagg ttgctgggct cgaataagac ttccacactg gcttcagtgc
660
ctccctggcc tcctggggct gcattaatga gtttttctgc gtggaagtct gtacagtcgg
720
tcctgcagta gtattctgtc ctctgccgtg tgtaattgat gaacttcaca aggatgattt
780
ggctgctgcc aaggacagtc tggaagtga caggcttttc cggaagtgtt ggcgtggcct
840
tcagatagag ctcatattgg tagtaacca agtcagtgtt gtgcaaagtt agtcttccga
900
aggtttctcc agctttcagg ggctgaaatt caaatgagaa cgtgccctcg gagttggcag
960
gcaccacaaa ctgggagggc agggcgatgt cgggcatccg gcattccgtg gagaaggtca
1020

```

ccgagtaggg cagaggggttc tccaacttga tggaggctga cgcaacttgc cggactgggg
1080
tcaccatctc gatgggttttg atgatgcctg aagggatgac cctgaaactc acattgtagt
1140
acaagaactc atttgtcacc tcgtttcggga agatcacctt tgcagcgtac gttccctcct
1200
tgtgggaaaa gaagttcagc ttgtagtctt tcttagagcc agacagtaca tcaatgtaat
1260
caaggccctt catagtgatg cttagggtccg gcttctcttg tttcagtatt tccacgatga
1320
cccggaaatct ctggggccttg ttcagccagt tgggtgattgg cagaagctca gtgtaggggg
1380
tcttacatgg cacttcacga tagatattgg ctacagcttt ggggagctca gaagtcccat
1440
gcagagcata cagccagccg gtcccatctg ggagggggaa gaagaggggtg ccctgggtgct
1500
tgcggttctc caagtccatg gtgcggggcc tgtagggtgat ctcatagggc ttgttttgct
1560
ggtgggcctc cagggtgatg aactcaggcc cctcccagtg ctgcacctca aagatgggggt
1620
gcagattcca ggtctggttg gtgcgggttg acagcaggat ggtctgcgtg tgcttgagc
1680
gcacctggca cgtgaaattc actacctctt ttaccgcagg tggccccacg cagactccag
1740
acagggttag actcagagga ctgcctccct ggatgtagca gagaatgttt ttacaaaggc
1800
tctcctttcc cacctcggtg ggatggtagg tcacttcaaa agaaacctcc atgcctgagg
1860
taatatagcc ttcttctggg ctaatggaga aatgaggctc aaattttttg atgtccatt
1920
taaaccttgc acccacatcg cctgtgttca acatgaggat gcgacgcgtg gcttgcgctc
1980
gatacaccac ggggtccaaag ggaatatgtt cctgggtccag tgagatctcc agggcctggc
2040
agcagccgct aaggaggaag agggggcgca ggagcccat gcattccatg aacacttctc
2100
cagagaaggg agggacacgc ttcttcgggg caaagatgac ttccagtta cagacttctt
2160
tgggcttcag tgtgatgttg tggaaggcg ccagggtgag gaccttgggt tcctggagtt
2220
ctggaattgt gaacagaatg gactgattaa atgtgagctg ggccaggctg ttgttcatga
2280
tggaactgt tcttttcaca acctgcctg gtaggacagc tccaacttc acaatcctgt
2340
tggctggatc taggactaaa atcttcattt cggtaccctt ccctttgatt tcgactgttt
2400
gttgtgagag ccattgatt tcaaagggaa tgagttcttg atagttgata ctttctcgag
2460
gataaaaagt tattggaatc tccaatgtgt ttctggctt taccacatca acacgggagt
2520
tcacctcgag gtgagtgggt ttggtgtaca gacaatctat gctcataggt gtttcttctc
2580
tgttgtaat taccagggtt tgtttgatg ggggcatccc agcttgatag ataaagcagg
2640

tcccaaagtt gtagctggtg aaggagaaat ggatagccgg gtcacagca cagcctgaga
 2700
 tgttgcacat aaatggttga ccatggctga tcttgattat gagttccagg tctgtcaaga
 2760
 cacacttctt taatggttga aaagacaggg tggcatgtac actctgtcct acatccacag
 2820
 tgctgtcgat gggtgaaaat tccaagtact gcagcaaggt tttggagcca cacagctgtg
 2880
 cctggaagct gaaggtgaac tttccagtgt tgataaagtt gaattcacac tggacacatt
 2940
 catttaactc cacctcatag aagttgatga tgtagtctg gttgggagtc aacagagtga
 3000
 tggagcctgt cctgtccttg cacttgatct ccacattcat agtgtagccc tcggccttga
 3060
 catttaatgt cacaggggtg actttctttt ccacattgca gatcaaatta aagttcacat
 3120
 ctccttcttg ctttggtgtg aagaaaatat caattgggaa cctggacagt ggtgggatcc
 3180
 agcc
 3184

<210> 2898

<211> 933

<212> PRT

<213> Homo sapiens

<400> 2898

Met	Asn	Val	Glu	Ile	Lys	Cys	Lys	Asp	Arg	Thr	Gly	Ser	Ile	Thr	Leu
1				5					10					15	
Leu	Thr	Pro	Asn	Gln	Thr	Asn	Ile	Ile	Asn	Phe	Tyr	Glu	Val	Glu	Leu
			20					25					30		
Asn	Glu	Cys	Val	Gln	Cys	Glu	Phe	Asn	Phe	Ile	Asn	Thr	Gly	Lys	Phe
		35					40					45			
Thr	Phe	Ser	Phe	Gln	Ala	Gln	Leu	Cys	Gly	Ser	Lys	Thr	Leu	Leu	Gln
	50					55					60				
Tyr	Leu	Glu	Phe	Ser	Pro	Ile	Asp	Ser	Thr	Val	Asp	Val	Gly	Gln	Ser
65					70					75				80	
Val	His	Ala	Thr	Leu	Ser	Phe	Gln	Pro	Leu	Lys	Lys	Cys	Val	Leu	Thr
			85						90					95	
Asp	Leu	Glu	Leu	Ile	Ile	Lys	Ile	Ser	His	Gly	Pro	Thr	Phe	Met	Cys
			100					105					110		
Asn	Ile	Ser	Gly	Cys	Ala	Val	Ser	Pro	Ala	Ile	His	Phe	Ser	Phe	Thr
		115					120					125			
Ser	Tyr	Asn	Phe	Gly	Thr	Cys	Phe	Ile	Tyr	Gln	Ala	Gly	Met	Pro	Pro
	130					135					140				
Tyr	Lys	Gln	Thr	Leu	Val	Ile	Thr	Asn	Lys	Glu	Glu	Thr	Pro	Met	Ser
145				150						155				160	
Ile	Asp	Cys	Leu	Tyr	Thr	Asn	Thr	Thr	His	Leu	Glu	Val	Asn	Ser	Arg
			165						170					175	
Val	Asp	Val	Val	Lys	Pro	Gly	Asn	Thr	Leu	Glu	Ile	Pro	Ile	Thr	Phe
			180					185					190		
Tyr	Pro	Arg	Glu	Ser	Ile	Asn	Tyr	Gln	Glu	Leu	Ile	Pro	Phe	Glu	Ile
		195				200						205			
Asn	Gly	Leu	Ser	Gln	Gln	Thr	Val	Glu	Ile	Lys	Gly	Lys	Gly	Thr	Glu

210	215	220
Met Lys Ile Leu Val	Leu Asp Pro Ala Asn Arg	Ile Val Lys Leu Gly
225	230	235
Ala Val Leu Pro Gly	Gln Val Val Lys Arg Thr	Val Ser Ile Met Asn
245	250	255
Asn Ser Leu Ala Gln	Leu Thr Phe Asn Gln Ser	Ile Leu Phe Thr Ile
260	265	270
Pro Glu Leu Gln Glu	Pro Lys Val Leu Thr Leu	Ala Pro Phe His Asn
275	280	285
Ile Thr Leu Lys Pro	Lys Glu Val Cys Lys Leu	Glu Val Ile Phe Ala
290	295	300
Pro Lys Lys Arg Val	Pro Phe Ser Glu Glu Val	Phe Met Glu Cys
305	310	315
Met Gly Leu Leu Arg	Pro Leu Phe Leu Leu Ser	Gly Cys Cys Gln Ala
325	330	335
Leu Glu Ile Ser Leu	Asp Gln Glu His Ile Pro	Phe Gly Pro Val Val
340	345	350
Tyr Gln Thr Gln Ala	Thr Arg Arg Ile Leu Met	Leu Asn Thr Gly Asp
355	360	365
Val Gly Ala Arg Phe	Lys Trp Asp Ile Lys Lys	Phe Glu Pro His Phe
370	375	380
Ser Ile Ser Pro Glu	Glu Gly Tyr Ile Thr Ser	Gly Met Glu Val Ser
385	390	395
Phe Glu Val Thr Tyr	His Pro Thr Glu Val Gly	Lys Glu Ser Leu Cys
405	410	415
Lys Asn Ile Leu Cys	Tyr Ile Gln Gly Gly Ser	Pro Leu Ser Leu Thr
420	425	430
Leu Ser Gly Val Cys	Val Gly Pro Pro Ala Val	Lys Glu Val Val Asn
435	440	445
Phe Thr Cys Gln Val	Arg Ser Lys His Thr Gln	Thr Ile Leu Leu Ser
450	455	460
Asn Arg Thr Asn Gln	Thr Trp Asn Leu His Pro	Ile Phe Glu Gly Glu
465	470	475
His Trp Glu Gly Pro	Glu Phe Ile Thr Leu Glu	Ala His Gln Gln Asn
485	490	495
Lys Pro Tyr Glu Ile	Thr Tyr Arg Pro Arg Thr	Met Asn Leu Glu Asn
500	505	510
Arg Lys His Gln Gly	Thr Leu Phe Pro Leu Pro	Asp Gly Thr Gly
515	520	525
Trp Leu Tyr Ala Leu	His Gly Thr Ser Glu Leu	Pro Lys Ala Val Ala
530	535	540
Asn Ile Tyr Arg Glu	Val Pro Cys Lys Thr Pro	Tyr Thr Glu Leu Leu
545	550	555
Pro Ile Thr Asn Trp	Leu Asn Lys Pro Gln Arg	Phe Arg Val Ile Val
565	570	575
Glu Ile Leu Lys Pro	Glu Lys Pro Asp Leu Ser	Ile Thr Met Lys Gly
580	585	590
Leu Asp Tyr Ile Asp	Val Leu Ser Gly Ser Lys	Lys Asp Tyr Lys Leu
595	600	605
Asn Phe Phe Ser His	Lys Glu Gly Thr Tyr Ala	Ala Lys Val Ile Phe
610	615	620
Arg Asn Glu Val Thr	Asn Glu Phe Leu Tyr Tyr	Asn Val Ser Phe Arg
625	630	635
Val Ile Pro Ser Gly	Ile Ile Lys Thr Ile Glu	Met Val Thr Pro Val

BNSDOCID: <WO 0058473A2 1 >

gaagaagaaa tgactgtggt ggaggaagcg gatgatgaca aaaaaaggct gctgcagatt
 360
 attgacagag atggggaaga ggaagaggaa gaggaggagc cattggatga aagctcagtg
 420
 aagaaaatga tcctcacatt tgaaaagaga tcatataaaa accaagaatt gcggattaag
 480
 tttccagaca atccagagaa gttcatggaa tccgagctgg acctaaatga catcattcag
 540
 gagatgcacg tgggtggccac catgccagac ctgtaccacc ttctggtgga gctgaatgct
 600
 gtacagtgcg ttctcggtt gtcggacac gataatacag atgtgtccat agctgtggtc
 660
 gatttgcttc aggaattaac agatatagac accctccatg agagtgaaga gggagcagaa
 720
 gtgctcatcg atgctctggt ggatgggcag gtggtagcac tgctggtaca gaatctggag
 780
 cgcttgatg agtctgtgaa agaggaggca gatggcgctcc acaacactct ggctattgtg
 840
 gaaaacatgg ctgagttccg gctgagatg tgtaca
 876

<210> 2900

<211> 189

<212> PRT

<213> Homo sapiens

<400> 2900

Met	Thr	Val	Val	Glu	Glu	Ala	Asp	Asp	Asp	Lys	Lys	Arg	Leu	Leu	Gln
1				5					10					15	
Ile	Ile	Asp	Arg	Asp	Gly	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Pro	Leu
		20					25						30		
Asp	Glu	Ser	Ser	Val	Lys	Lys	Met	Ile	Leu	Thr	Phe	Glu	Lys	Arg	Ser
		35					40					45			
Tyr	Lys	Asn	Gln	Glu	Leu	Arg	Ile	Lys	Phe	Pro	Asp	Asn	Pro	Glu	Lys
	50					55					60				
Phe	Met	Glu	Ser	Glu	Leu	Asp	Leu	Asn	Asp	Ile	Ile	Gln	Glu	Met	His
65					70					75					80
Val	Val	Ala	Thr	Met	Pro	Asp	Leu	Tyr	His	Leu	Leu	Val	Glu	Leu	Asn
				85					90					95	
Ala	Val	Gln	Ser	Leu	Leu	Gly	Leu	Leu	Gly	His	Asp	Asn	Thr	Asp	Val
		100					105						110		
Ser	Ile	Ala	Val	Val	Asp	Leu	Leu	Gln	Glu	Leu	Thr	Asp	Ile	Asp	Thr
	115					120						125			
Leu	His	Glu	Ser	Glu	Glu	Gly	Ala	Glu	Val	Leu	Ile	Asp	Ala	Leu	Val
	130					135					140				
Asp	Gly	Gln	Val	Val	Ala	Leu	Leu	Val	Gln	Asn	Leu	Glu	Arg	Leu	Asp
145					150					155					160
Glu	Ser	Val	Lys	Glu	Glu	Ala	Asp	Gly	Val	His	Asn	Thr	Leu	Ala	Ile
			165					170						175	
Val	Glu	Asn	Met	Ala	Glu	Phe	Arg	Pro	Glu	Met	Cys	Thr			
			180						185						

<210> 2901

<211> 756

<212> DNA

<213> Homo sapiens

<400> 2901

acgcgtcggg gaggggcttt cgactttttt gagaagcaag accaagtggc agaagagggg
60
ccgcccgtcc agagcctgaa gggcgaggat gctgaggaat ccttggagga ggaggagggc
120
ctggaccctc tgggcattat gcgctccaag aagcccaaga aacatcccaa agtggccgtg
180
aaagccaagc cctcgccccg gctcaccatc tttgacgagg aggtggaccc tgatgagggg
240
ctcttttgcc cgggcaggaa gctgtctcca caggaccctt cggaggacgt gtcattccatg
300
gacccccctga agctatttga tgatcctgac ctcggcgggg ccattccccct gggtgactcc
360
ctcctgctgc cggccgcctg tgagagtggg gggcccacac ccagcctcag ccacagggac
420
gcctccaagg aactgttcag gtaccacctg tccccagcgg cgcttgggca gctctgagag
480
tgtcctggac agagccaagg gcccggtcca ttgcccagtc tcagccccag cctcctctga
540
ggggaggacc ccaggcctgt gaaaagtaga agcctgtggg tgcacattgg gtgagagggc
600
gtgaaggggg ctgaggggga ggnaantcgc ccaggggctgc tcagctagtt ccagaaagag
660
agaactttgt gtgcacaacc agtctttctt ttcacaatca tattttaaca gtttatgtaa
720
agaataatta aattatataa ttgccagggc aaaaaa
756

<210> 2902

<211> 158

<212> PRT

<213> Homo sapiens

<400> 2902

Thr	Arg	Arg	Arg	Gly	Ala	Phe	Asp	Phe	Phe	Glu	Lys	Gln	Asp	Gln	Val
1				5				10					15		
Ala	Glu	Glu	Gly	Pro	Pro	Val	Gln	Ser	Leu	Lys	Gly	Glu	Asp	Ala	Glu
			20				25					30			
Glu	Ser	Leu	Glu	Glu	Glu	Glu	Ala	Leu	Asp	Pro	Leu	Gly	Ile	Met	Arg
	35					40					45				
Ser	Lys	Lys	Pro	Lys	Lys	His	Pro	Lys	Val	Ala	Val	Lys	Ala	Lys	Pro
	50				55					60					
Ser	Pro	Arg	Leu	Thr	Ile	Phe	Asp	Glu	Glu	Val	Asp	Pro	Asp	Glu	Gly
65				70					75					80	
Leu	Phe	Gly	Pro	Gly	Arg	Lys	Leu	Ser	Pro	Gln	Asp	Pro	Ser	Glu	Asp
			85				90						95		
Val	Ser	Ser	Met	Asp	Pro	Leu	Lys	Leu	Phe	Asp	Asp	Pro	Asp	Leu	Gly
			100				105						110		
Gly	Ala	Ile	Pro	Leu	Gly	Asp	Ser	Leu	Leu	Leu	Pro	Ala	Ala	Cys	Glu
	115					120						125			
Ser	Gly	Gly	Pro	Thr	Pro	Ser	Leu	Ser	His	Arg	Asp	Ala	Ser	Lys	Glu

130 135 140
 Leu Phe Arg Tyr His Leu Ser Pro Ala Ala Leu Gly Gln Leu
 145 150 155

<210> 2903
 <211> 542
 <212> DNA
 <213> Homo sapiens

<400> 2903
 aagcttatgt tctctcttta tccaaggctt cgacacctcg gactggggaa ggagggaatc
 60
 accacctatt tctctgggaa ttgtaccatg gaagatgccca aattggccca ggactttctg
 120
 gactcacaga acctcagtgc ctacaacacc cggctcttca aagaggtcga tggagaaggg
 180
 aagccctact acgagggtgcg gctggcttct gtgcttggtt cagagccttc cctggactct
 240
 gaggtgactt ccaagctgaa gagctatgaa ttccggggaa gccctttcca ggtgacccgg
 300
 ggggactacg cgcccatcct ccagaagggtg gtggagcagc tggagaaagc caaggcctat
 360
 gcagccaaca gccaccaggg gcagatgctg gccaggtata tagagagctt caccaggggc
 420
 tccatcgagg ccacaagag gggctccgc ttctggatcc aggacaaagg ccccatcgt
 480
 ggagaggtga ggcgccagct ccaccccacc tgccccctcc tgctgcccc tccttcacgc
 540
 gt
 542

<210> 2904
 <211> 180
 <212> PRT
 <213> Homo sapiens

<400> 2904
 Lys Leu Met Phe Ser Leu Tyr Pro Arg Leu Arg His Leu Gly Leu Gly
 1 5 10 15
 Lys Glu Gly Ile Thr Thr Tyr Phe Ser Gly Asn Cys Thr Met Glu Asp
 20 25 30
 Ala Lys Leu Ala Gln Asp Phe Leu Asp Ser Gln Asn Leu Ser Ala Tyr
 35 40 45
 Asn Thr Arg Leu Phe Lys Glu Val Asp Gly Glu Gly Lys Pro Tyr Tyr
 50 55 60
 Glu Val Arg Leu Ala Ser Val Leu Gly Ser Glu Pro Ser Leu Asp Ser
 65 70 75 80
 Glu Val Thr Ser Lys Leu Lys Ser Tyr Glu Phe Arg Gly Ser Pro Phe
 85 90 95
 Gln Val Thr Arg Gly Asp Tyr Ala Pro Ile Leu Gln Lys Val Val Glu
 100 105 110
 Gln Leu Glu Lys Ala Lys Ala Tyr Ala Ala Asn Ser His Gln Gly Gln
 115 120 125
 Met Leu Ala Gln Tyr Ile Glu Ser Phe Thr Gln Gly Ser Ile Glu Ala

130	135	140
His Lys Arg Gly Ser Arg Phe Trp Ile Gln Asp Lys Gly Pro His Arg		
145	150	155
Gly Glu Val Arg Arg Gln Leu His Pro Thr Cys Pro Leu Leu Pro Ala		160
	165	170
Pro Pro Ser Arg		175
180		

<210> 2905
 <211> 814
 <212> DNA
 <213> Homo sapiens

<400> 2905
 ttttcatatc ccagttttgt ttatttgga acatttactc ttgtggataa cagaatacca
 60
 gtcacaagat ccttcttctg tattacaaat tctgccactt tgtttcagaa ctgggtatca
 120
 ggattcctcc tctgcccagg tttctgctgt cccccaaaa gaaagacatg tagctgggca
 180
 tgggtgtaca catctgtggt ccagttact caggaggctg aggcaggagg attgcttgag
 240
 ccaggtgtt caaggttgca gtgggctgtg aatgctctac ttcactccag cctgagcaac
 300
 agagcaagac ccggccctc ttctcgactt tctatccctc ctctcaaca ccctttcctt
 360
 ctggaaatgg gcttcggggg ggtaaccaa gccagggaa acttgctggtg ccagcatct
 420
 tccgtccgct gcaggaggag cacacgcccc cggcccggtg cagcaagacg cgagaaagcg
 480
 gccacgccgg gcgtccggga gctgaggctg gagggcgctt ggcaggcagg gcggggccca
 540
 ggcgggcgga gtgcttatga ccggcgctg gggaacttc tggacgtcaa gggggcacta
 600
 taaagcggca cagtcttgag ccttcgctct tcacctaat cagtgagcgc ccttcgcaaa
 660
 gcctctgtg aggtaaccat tgggggttcg cctccaaatc caggaatgca cctcaaaaat
 720
 gctcctacac cgtaagaccg tgccttcaa tgcaaagggg actgtgcggc gaggcaccga
 780
 caagccgtag ccctgagacc actcaaagcc tgca
 814

<210> 2906
 <211> 200
 <212> PRT
 <213> Homo sapiens

<400> 2906
 Phe Ser Tyr Pro Ser Phe Val Tyr Leu Gly Thr Phe Thr Leu Val Asp
 1 5 10 15
 Asn Arg Ile Pro Val Thr Arg Ser Phe Phe Cys Ile Thr Asn Ser Ala
 20 25 30
 Thr Leu Phe Gln Asn Trp Val Ser Gly Phe Leu Leu Cys Pro Gly Phe

```

      35              40              45
Cys Cys Pro Pro Lys Arg Lys Thr Cys Ser Trp Ala Trp Trp Tyr Thr
  50              55              60
Ser Val Val Pro Val Thr Gln Glu Ala Glu Ala Gly Gly Leu Leu Glu
  65              70              75              80
Pro Arg Cys Ser Arg Leu Gln Trp Ala Val Asn Ala Leu Leu His Ser
      85              90              95
Ser Leu Ser Asn Arg Ala Arg Pro Arg Pro Ser Ser Arg Leu Ser Ile
      100              105              110
Pro Pro Pro Gln His Pro Phe Leu Leu Glu Met Gly Phe Gly Val Val
      115              120              125
Asn Gln Ala Gln Gly Asn Leu Arg Gly Pro Ala Ser Ser Val Arg Cys
      130              135              140
Arg Arg Ser Thr Arg Pro Arg Pro Gly Ser Ala Arg Arg Glu Lys Ala
      145              150              155              160
Ala Thr Pro Gly Val Arg Glu Leu Arg Leu Glu Gly Ala Trp Gln Ala
      165              170              175
Gly Arg Gly Pro Gly Gly Gly Ser Ala Tyr Asp Arg Arg Trp Gly Glu
      180              185              190
Leu Leu Asp Val Lys Gly Pro Leu
      195              200

```

<210> 2907

<211> 379

<212> DNA

<213> Homo sapiens

<400> 2907

```

ntgagaccct gtctcaaagt aaaaaattct gaaaaatgct atgaccgtga gtgaccggcc
  60
atcagcaggc tgtgatctgc cgaaactcat gacagcgagc ctcaatggct gggctcttaag
  120
aaacagcatc ttcacttttc ccaggctgct ttccaatttc caacactgtc cccaagatta
  180
caaaggcaaa ggaattcttc ccttaatggt ggacgggcct gagactgctc caccctgggc
  240
tcattacact gggaccagct ttaagcttcc ctgttcaacg cggagagctc cacagcccag
  300
gacgacagag cagatgatgg cagcagcccc tcaaaaccca gacaggcctt cttggcttgc
  360
cctggccgat gccaccggt
  379

```

<210> 2908

<211> 113

<212> PRT

<213> Homo sapiens

<400> 2908

```

Met Thr Val Ser Asp Arg Pro Ser Ala Gly Cys Asp Leu Pro Lys Leu
  1              5              10              15
Met Thr Ala Ser Leu Asn Gly Trp Val Leu Arg Asn Ser Ile Phe Thr
      20              25              30
Phe Pro Arg Leu Leu Ser Asn Phe Gln His Cys Pro Gln Asp Tyr Lys

```


	35		40		45	
Gly	Lys	Gly	Ile	Leu	Pro	Leu
	50		55		60	
Pro	Trp	Ala	His	Tyr	Thr	Gly
65			70		75	
Arg	Arg	Ala	Pro	Gln	Pro	Arg
			85		90	
Pro	Gln	Asn	Pro	Asp	Arg	Pro
	100		105		110	
Gly						

<210> 2909

<211> 2420

<212> DNA

<213> Homo sapiens

<400> 2909

```

tttttttttt ttttaatttat aaaatatcct ttattttattc taaggaacag tcaagcagta
60
gctttaaaaa aaaaaaaaaa gacacatttt ttgaaagata ttcttagtgt tgtgacctgg
120
cattgggccc ctgtgagcgg gacggtggct gagaccgcct gctgtggctt tgcgagttct
180
ctgcactcac tggcaggggt ttggtgggaa acggggaagc tttggcatgg ttctgtccag
240
ttgcttataa tcaagaataa tgagttttga gggtttacaaa gagcagaagt aacattttata
300
cggctggcat ttgacaaaag attgctgata atatactcat tccaggaagt gtaaaaatgc
360
tttaaaggaa tgataatttg tacttactgt ttatggggac tagatatatt agaattatag
420
catcattatg gggacatagt gtttccctat aaattcagaa attctctggt tgatgtaaaa
480
tcatacttcc tggttttact taattagtaa agaaataaat aaattagagt aacatttagt
540
caggtagagt tactcctttt tccccttctt tattaataaa ttttattttt agcacaatca
600
tttaccctaaa aagagagttt gagaatgttc gagaatctct accactcggg aacctgctg
660
gctgttatat cagaaaaatc cataaacata cacagcagcg agctgttttc acaagacttc
720
ctgctaataa acacaacact ttctctcca ctcagatggg agcctcagat gccaaaacgc
780
agatgtgcca actaactata ggctcggtgc taagcagaga aacctatcaa gtttgtccag
840
caaattcgat tgtacagtgg gatggcgtct gctctgcggc cttggacagg gagccactgg
900
tctgtgctgc tgtcccctga ggcaggtcga agctggtggc ccttagaggg caggtaaaat
960
ggttctcatg ggttagaaca taagggtttt gagaaaaaat gcaaaagggt tcattgaaat
1020
tgagggccta tgtgaatctg ttacatgga ggcatactga gatctcgttc tgtgcttagg
1080

```

tgaactgcag gtctcacgct ggctgcatga cttggtgccc cctggetggc tgagccactg
1140
cctgccacct tctcatacca ttacgtgggg gtctaaagag gacatcatcc ccaaccaaag
1200
aatagtgaga gagaaaatcc caaacatttg agacagggtt caaaagcacc cagacgcctt
1260
ctgtctcttt cccagttccc atctggctag ggactgtgaa tcagaattca gaatctgtgc
1320
tgccctgagg ggacaggcac ccaaagcaa taaataacac caagctcagg acccagccac
1380
tgaccttctt ccaccactgc tgcgggttat tcctcgatgg gaactgaagg atccaaggga
1440
ggaatccgtt cgcggcccaa acctccctgc acaacatcga atgcgggagt ctggctgctg
1500
cttctgcaca ggacagagcc tccagtcttt tgcttgagag catcatttat ggcattggact
1560
gggaacgcaa tgtgttcaca caaatgcacg acaattgtac atcagcatct ttacaatatt
1620
aaaggagtca tatacaagtc tacagccatt gtacacagga tggatgatggc tggggagccc
1680
cgcccaccag tcctctgcag tttctccacc ggagaacact tggggagctg tcacaaggcc
1740
aggggggggc catctttggg cctgtcgtgg ggcaggcagc aggtctgcaa ggactcctca
1800
gggccagtcc tcaactggaat caggggtcaa gagcgccagg tctgcctgtg tctgggtctc
1860
atcggcaggc tagtgtaaca acgtgaatta aaactgtgca tattcgcatg agaaaactgg
1920
agctggggat ggctccctga gctggggacc tagaagacgc tgctgacaga tgggcccctt
1980
catggtgggg ccatttctg aggtaacgtg cagccctgag gctggtccga acgggaggag
2040
acttctccag cagcccaggt gccagtccac acagacagga ctggaagccc ctgggcagca
2100
ggtcaggatga cccggggagt gcagcctgag cccccaacgg cagcaaacgt gaaggtctca
2160
ggtggttaca gaatcactca gccctcagge ccccaccact ctctcccag cagccctgca
2220
gcacacatcc ctgcatctgt cccgagagcc ccagccctgc aggcattctgg gcctgaatgc
2280
caggcagctg gtccaccctg cagccatgct gcacgtctga ctgagaactg agcaccagat
2340
aaagaagcat tggctcctgt cagcctctct gacttttgca gttagggctg catccattta
2400
aatatgtaga aaaatagcca
2420

<210> 2910

<211> 153

<212> PRT

<213> Homo sapiens

<400> 2910

Met Gly Thr Glu Gly Ser Lys Gly Gly Ile Arg Ser Ala Pro Lys Pro

```

      1           5           10           15
Pro Cys Thr Thr Ser Asn Ala Gly Val Trp Leu Leu Leu Leu His Arg
      20           25           30
Thr Glu Pro Pro Val Phe Cys Leu Arg Ala Ser Phe Met Ala Trp Thr
      35           40           45
Gly Asn Ala Met Cys Ser His Lys Cys Thr Thr Ile Val His Gln His
      50           55           60
Leu Tyr Asn Ile Lys Gly Val Ile Tyr Lys Ser Thr Ala Ile Val His
      65           70           75           80
Arg Met Val Met Ala Gly Glu Pro Arg Pro Pro Val Leu Cys Ser Phe
      85           90           95
Ser Thr Gly Glu His Leu Gly Ser Cys His Lys Ala Arg Gly Gly Pro
      100          105          110
Ser Leu Gly Leu Ser Trp Gly Arg Gln Gln Val Cys Lys Asp Ser Ser
      115          120          125
Gly Pro Val Leu Thr Gly Ile Arg Gly Gln Glu Arg Gln Val Cys Leu
      130          135          140
Cys Leu Gly Leu Ile Gly Arg Leu Val
      145          150

```

<210> 2911

<211> 1327

<212> DNA

<213> Homo sapiens

<400> 2911

```

nngcaaggcg gcacgtcctg ctccccctgg tgaagaagct gccctgggct tgtcgtccta
60
gggtctccag acatgtctga ggtgaagagc cggaagaagt cggggcccaa gggagcccct
120
gctgcggagc ccgggaagcg gagcgagggc gggaagaccc ccgtggccccg gagcagcgga
180
ggcgggggct gggcagaccc ccgaacgtgc ctgagcctgc tgtcgtctggg gacgtgcctg
240
ggcctggcct ggtttgtatt tcagcagtcg gaaaaatttg caaaggtgga aaaccaatac
300
cagttactga aactagaaac caatgaattc caacaacttc aaagtaaaat cagtttaatt
360
tcagaaaaagt ggcagaaatc tgaagctatc atggaacaat tgaagtcttt tcaaataatt
420
gctcatctaa agcgtctaca ggaagaaatt aatgaggtaa aaacttggtc caataggata
480
actgaaaaac aggatatact gaacaacagt ctgacgacgc tttctcaaga cattacaaaa
540
gtagaccaaa gtacaacttc catggcaaaa gatgttggtc tcaagattac aagtgtaaaa
600
acagatatac gacggatttc aggttttagta actgatgtaa tatcattgac agattctgtg
660
caagaactag aaaataaaat agagaaagta gaaaaaaata cagtaaaaaa tataggtgat
720
cttctttcaa gcagtattga tcgaacagca acgctccgaa agacagcatc tgaaaattca
780
caaagaatta actctgttaa gaagacgcta accgaactaa agagtgactt cgacaaacat
840

```

acagatagat ttctaagctt agaaggtgac agagccaaag ttctgaagac agtgactttt
 900
 gcaaatgata taaaacaaaa ggtgtataat cttaaagaagg actttttcccg tttagaacca
 960
 ttagtaaatg atttaacact acgcattggg agattgggta ccgacttact acaaagagag
 1020
 aaagaaattg ctttcttaag tgaaaaaata tctaatttaa caatagtcca agctgagatt
 1080
 aaggatatta aagatgaaat agcacacatt tcagatatga attagtttga cattattgag
 1140
 attagactaa ggtaattttt ttaatgggac ctctcatgag aagactggta aatcaaaaat
 1200
 aatgatattt tggagcaaaa gtcattttat atttaatcct attttgtaca gtaaaaaata
 1260
 aactttaaaa caggttgatt ttccaaaata aatatgctaa aacctatttt tgcaacttta
 1320
 aaaaaaa
 1327

<210> 2912

<211> 350

<212> PRT

<213> Homo sapiens

<400> 2912

Met	Ser	Glu	Val	Lys	Ser	Arg	Lys	Lys	Ser	Gly	Pro	Lys	Gly	Ala	Pro
1				5					10					15	
Ala	Ala	Glu	Pro	Gly	Lys	Arg	Ser	Glu	Gly	Gly	Lys	Thr	Pro	Val	Ala
			20					25					30		
Arg	Ser	Ser	Gly	Gly	Gly	Gly	Trp	Ala	Asp	Pro	Arg	Thr	Cys	Leu	Ser
			35				40					45			
Leu	Leu	Ser	Leu	Gly	Thr	Cys	Leu	Gly	Leu	Ala	Trp	Phe	Val	Phe	Gln
			50			55					60				
Gln	Ser	Glu	Lys	Phe	Ala	Lys	Val	Glu	Asn	Gln	Tyr	Gln	Leu	Leu	Lys
65					70					75					80
Leu	Glu	Thr	Asn	Glu	Phe	Gln	Gln	Leu	Gln	Ser	Lys	Ile	Ser	Leu	Ile
				85					90					95	
Ser	Glu	Lys	Trp	Gln	Lys	Ser	Glu	Ala	Ile	Met	Glu	Gln	Leu	Lys	Ser
			100					105					110		
Phe	Gln	Ile	Ile	Ala	His	Leu	Lys	Arg	Leu	Gln	Glu	Glu	Ile	Asn	Glu
			115				120					125			
Val	Lys	Thr	Trp	Ser	Asn	Arg	Ile	Thr	Glu	Lys	Gln	Asp	Ile	Leu	Asn
			130			135					140				
Asn	Ser	Leu	Thr	Thr	Leu	Ser	Gln	Asp	Ile	Thr	Lys	Val	Asp	Gln	Ser
145					150					155					160
Thr	Thr	Ser	Met	Ala	Lys	Asp	Val	Gly	Leu	Lys	Ile	Thr	Ser	Val	Lys
				165					170					175	
Thr	Asp	Ile	Arg	Arg	Ile	Ser	Gly	Leu	Val	Thr	Asp	Val	Ile	Ser	Leu
			180					185					190		
Thr	Asp	Ser	Val	Gln	Glu	Leu	Glu	Asn	Lys	Ile	Glu	Lys	Val	Glu	Lys
			195				200					205			
Asn	Thr	Val	Lys	Asn	Ile	Gly	Asp	Leu	Leu	Ser	Ser	Ser	Ile	Asp	Arg
			210			215					220				
Thr	Ala	Thr	Leu	Arg	Lys	Thr	Ala	Ser	Glu	Asn	Ser	Gln	Arg	Ile	Asn

```

225          230          235          240
Ser Val Lys Lys Thr Leu Thr Glu Leu Lys Ser Asp Phe Asp Lys His
          245          250          255
Thr Asp Arg Phe Leu Ser Leu Glu Gly Asp Arg Ala Lys Val Leu Lys
          260          265          270
Thr Val Thr Phe Ala Asn Asp Leu Lys Pro Lys Val Tyr Asn Leu Lys
          275          280          285
Lys Asp Phe Ser Arg Leu Glu Pro Leu Val Asn Asp Leu Thr Leu Arg
          290          295          300
Ile Gly Arg Leu Val Thr Asp Leu Leu Gln Arg Glu Lys Glu Ile Ala
305          310          315          320
Phe Leu Ser Glu Lys Ile Ser Asn Leu Thr Ile Val Gln Ala Glu Ile
          325          330          335
Lys Asp Ile Lys Asp Glu Ile Ala His Ile Ser Asp Met Asn
          340          345          350

```

```

<210> 2913
<211> 361
<212> DNA
<213> Homo sapiens

```

```

<400> 2913
gtcatccagg gcatcgtgaa cgaagtgcgc cagtccatgc agctgatgct gagccagctg
60
atccagcaac tgaggaccaa catccagctt cctgcctgcc tccgtgtcat tggctacctg
120
cggcgcatgg acgtcttcac tgaggctgag ttgaggggtga agtttcttca ggcccagat
180
gcttggtctcc ggtccatcct gactgccatt cctaataatg atccctatct ccatattaca
240
aaaaccatcg agggcctccc gtgtccatct ctttgatatc atcaccagc accggggccat
300
cttctcagac gaggaccac tgctgcccc tgccatgggt gagcacactg ggatgagagt
360
g
361

```

```

<210> 2914
<211> 112
<212> PRT
<213> Homo sapiens

```

```

<400> 2914
Met Ala Gly Gly Ser Ser Gly Ser Ser Ser Glu Lys Met Ala Arg Tyr
1          5          10          15
Trp Val Met Ile Ser Lys Arg Trp Thr Arg Glu Ala Leu Asp Gly Phe
          20          25          30
Cys Asn Met Glu Ile Gly Ile Ile Ile Arg Asn Gly Ser Gln Asp Gly
          35          40          45
Pro Glu Pro Ser Ile Ser Gly Leu Lys Lys Leu His Pro Gln Leu Ser
          50          55          60
Leu Ser Glu Asp Val His Ala Pro Gln Val Ala Asn Asp Thr Glu Ala
65          70          75          80
Gly Arg Lys Leu Asp Val Gly Pro Gln Leu Leu Asp Gln Leu Ala Gln

```

	85		90		95										
His	Gln	Leu	His	Gly	Leu	Ala	His	Phe	Val	His	Asp	Ala	Leu	Asp	Asp
	100						105						110		

<210> 2915

<211> 1782

<212> DNA

<213> Homo sapiens

<400> 2915

caagaggatc accttaaaca cttaagaacc ctcgaaaaaa cattagaaaa aatggagaga
 60
 caaaaaaggc agcagcaggc agcacagata agactgatcc aagaggtgga actcaaagct
 120
 tcagctgccg atagagaaat atacttactt agaacttccc ttcacgcaga aagagaacaa
 180
 gcgcaacaac ttcacaaact tcttgcatcg aaagaacagg aacacaggaa ggaacttgaa
 240
 acaagggagt tttttactga tgctgacttc caggatgcct tagctaaaga aatagccaaa
 300
 gaagagaaaa agcatgagca aatgataaaa gaataccaag agaaaattga cgtgttaagc
 360
 cagcagtata tggatttaga aaatgaattc cgtattgctt taactgttga agccagaaga
 420
 tttcaagatg ttaaagatgg ttttgaaaat gttgcaactg agttagcaaa gagcaaacat
 480
 gctcttattt gggctcaacg aaaagaaaat gagtcttcct ctttaattaa agatctgacc
 540
 tgtatggtaa aggaacaaaa aacaaaactg gcagaagttt cttaaattgaa acaagaaaca
 600
 gcagcaaat tacagaatca aatcaacacc cttgaaattt taattgaaga tgacaagcag
 660
 aagagtattc aaatagaact tctcaagcac gaaaaagtcc agcttatttc tgagctagca
 720
 gccaaaggaat cactaatatt tggtttaagg acagaaagaa aagtatgggg acatgagctg
 780
 gcacaacaag gatcttctct agcccaaaaat cgtggaaaat tggaggctca aattgagagt
 840
 ttatctagag agaatgaatg tctgcgaaag acaaatgaaa gtgatagtga tgcattaaga
 900
 ataaagtgca aaatcataga cgaccaaact gaaactatta gaaaattaaa agattgttta
 960
 caagaaaaag atgaacacat caaaagatta caagaaaaga tcacagaaat agaaaaatgc
 1020
 actcaagaac aacttgatga aaaatcttca caactggatg aggtacttga gaagttggaa
 1080
 aggcacaatg aaagaaaaga aaaactaaaa caacagttga aaggaaagga agtagaactt
 1140
 gaagaaatca gaaaagctta cagtacactg aatcggaagt ggcattgata aggagaactt
 1200
 ctatgtcatc ttgaaacaca agtaaaagaa gtgaaagaaa aatttgaaaa caaggaaaag
 1260
 aaacttaaag cggaagaga caaaagtatt gaactacaaa agaattgcaat ggaaaaactt
 1320

catagtatgg atgatgcctt taaaagacaa gttgatgcaa ttgttgaagc tcatcaagct
 1380
 gaaatagcac agctggccaa tgaaaagcag aagtgtattg attctgcaaa tttaaaggctc
 1440
 catcaaattg aaaaagaaat gcgtgaactt ttggaagaaa catgcaagaa caaaaaaaca
 1500aaattaagca acttgctttt gctttaaatg aaattcagca agatatgtga 1560
 tggttctgag aatgaattta attgaaatag accagcagac ctattgtaaa aatgattaaa
 1620
 tattgtaata gtagtaactg ctatgacttt gaaatgtctc tttctatàca tttcattatg
 1680
 aatatatttt taaagacttt tgatcaagta tttattaatt gtataggttt tttataataa
 1740
 attgttgaca attttgtcta ttagaaaaaa ctaaaaaaaa aa
 1782

<210> 2916

<211> 519

<212> PRT

<213> Homo sapiens

<400> 2916

Gln	Glu	Asp	His	Leu	Lys	His	Leu	Arg	Thr	Leu	Glu	Lys	Thr	Leu	Glu
1				5				10						15	
Lys	Met	Glu	Arg	Gln	Lys	Arg	Gln	Gln	Gln	Ala	Ala	Gln	Ile	Arg	Leu
			20					25					30		
Ile	Gln	Glu	Val	Glu	Leu	Lys	Ala	Ser	Ala	Ala	Asp	Arg	Glu	Ile	Tyr
	35					40						45			
Leu	Leu	Arg	Thr	Ser	Leu	His	Arg	Glu	Arg	Glu	Gln	Ala	Gln	Gln	Leu
	50					55					60				
His	Gln	Leu	Leu	Ala	Leu	Lys	Glu	Gln	Glu	His	Arg	Lys	Glu	Leu	Glu
65					70					75					80
Thr	Arg	Glu	Phe	Phe	Thr	Asp	Ala	Asp	Phe	Gln	Asp	Ala	Leu	Ala	Lys
			85					90						95	
Glu	Ile	Ala	Lys	Glu	Glu	Lys	Lys	His	Glu	Gln	Met	Ile	Lys	Glu	Tyr
		100						105				110			
Gln	Glu	Lys	Ile	Asp	Val	Leu	Ser	Gln	Gln	Tyr	Met	Asp	Leu	Glu	Asn
	115					120						125			
Glu	Phe	Arg	Ile	Ala	Leu	Thr	Val	Glu	Ala	Arg	Arg	Phe	Gln	Asp	Val
	130					135					140				
Lys	Asp	Gly	Phe	Glu	Asn	Val	Ala	Thr	Glu	Leu	Ala	Lys	Ser	Lys	His
145					150					155					160
Ala	Leu	Ile	Trp	Ala	Gln	Arg	Lys	Glu	Asn	Glu	Ser	Ser	Ser	Leu	Ile
			165					170						175	
Lys	Asp	Leu	Thr	Cys	Met	Val	Lys	Glu	Gln	Lys	Thr	Lys	Leu	Ala	Glu
	180							185					190		
Val	Ser	Lys	Leu	Lys	Gln	Glu	Thr	Ala	Ala	Asn	Leu	Gln	Asn	Gln	Ile
	195					200						205			
Asn	Thr	Leu	Glu	Ile	Leu	Ile	Glu	Asp	Asp	Lys	Gln	Lys	Ser	Ile	Gln
	210					215					220				
Ile	Glu	Leu	Leu	Lys	His	Glu	Lys	Val	Gln	Leu	Ile	Ser	Glu	Leu	Ala
225				230						235					240
Ala	Lys	Glu	Ser	Leu	Ile	Phe	Gly	Leu	Arg	Thr	Glu	Arg	Lys	Val	Trp
			245					250					255		
Gly	His	Glu	Leu	Ala	Gln	Gln	Gly	Ser	Ser	Leu	Ala	Gln	Asn	Arg	Gly

```

ncttgctgtg gccaccgctg gttccagccg gccatccccct cctggctgca gaagacgtac
60
aacgaggccc tggcgcggggt gcagcgggnet gtgcagatgg atgagctggt gcccttgggt
120
gaactgacca agcacagcac atcagcgggtg gatctatcca ctngctttgc ccagatcagc
180
cacactgccc ggcagctgga ctggccagac ccagaggagg cttcatgat taccgtcaag
240
tttgtggagg acacctgtcg cctggccctg gtgtactgca gccttataaa ggcccggggc
300
cgcgagctct cttcaggcca gaaggaccaa ggccaggcag ccaacatgct gtgtgtggtg
360
gtgaatgaca tggagcagct gcggctgggtg atcggcaagt tgcccgccca gctggcatgg
420

```


gaggcccttg agcagcgggt agggggccgtg ctggagcagg ggcagctgca gaacacgctg
480
catgcccagc tgcagagcgc gctggccggg ctgggccatg agatccgcac tggcgtccgc
540
accctggccg agcagttgga ggtggggcatc gccaaagcaca tccagaaact ggtggggcgtc
600
agggagtctg tcctgcctga ggatgccatt ctgcccctga tgaagttcct ggaggtggag
660
ctttgctaca tgaacaccaa cttggtgcag gagaacttca gcagcctcct gaccctgctc
720
tggaaccaca cactcacagt gctggtggag gcggccgcct cccagcgcag ctcacccctg
780
gcttccaaca ggctgaagat tgccctgcag aacctggaga tctgcttcca cgctgagggc
840
tgtggcctgc caccaaggc cctgcacact gccaccttcc aggctctgca gagggaacctg
900
gagctgcagg cggcctccag ccgggaactc atccggaagt acttctgcag ccgaatccag
960
cagcaggcag aaaccacctc tgaggagctg ggggctgtga cagtcaaggc ctcctaccgc
1020
gcctctgagc agaagctgcg tgtggagctg ctcagcgcct ccagcctgct gcccctggac
1080
tccaatggct ccagcgacct ctttgtccag ctgaccttgg agcccaggca tgagttccct
1140
gagctggccg cccgggagac ccagaagcac aagaaggacc ttcacccatt gtttgatgag
1200
acctttgaat tcctggtgcc tgctgagccg tgccgcaagg ctggggcatg cctcctgctc
1260
accgtgctgg actacgacac gctggggggc gacgacctgg aaggcgaggc cttcctgccg
1320
ctgctgagg tgcccgggt gagtggtctt gaggagcctg gtgaggtgcc tcagaccgc
1380
ctgcccctca cgtaccccg acccaacggg gacccaatcc tgagctgct ggagggccgg
1440
aagggtgacc gagaagccca ggtctttgtg aggtgcggc ggcaccgggc caagcaggcc
1500
tcccagcatg ccttgccggc gccaccgtag ccgtagaggt ttgcggtggg gctgggtccc
1560
cgggtggggac ttgcaagggc cttcctgtag ggtctggggc ttccccgcca catcgccggc
1620
ctccagcctg gcctaacact tggggagccc cagcatgcgg agtgcccaga gtgcagacct
1680
cccctgcctc ccatggtgat gggggctcag cagcgacatc tctactccc cctccctgcc
1740
tccagccctg gctgcaatgt ctctaccaca tcccagcacc agggggagca aacctgccc
1800
ctgcccgcct ctcagaaaag ctgctgtggt gggcagggga ttggggcatc tgtctcctgg
1860
ccctggccca tctgcctcct ggccttctg ttccagccac tggggtgggg gccaggttca
1920
ctgggaccag ggctacaggc acagagtctc ctggaaaagg gagaggggac cctgccaaag
1980
atgaggctcc agctgccctg gggggagggt ggtggccatt actagagggg gcctgggtcc
2040

tctccccagg ggctgccagc atccaggcca ggaagcctgg agccaagaac cttctggctc
 2100
 tgaggagca agagctggca ggcggcaggg ctggcacaga cagacggaag cagaaaggac
 2160
 agtttggctg ctgtgtctgt gcgcacgccc cctccccgga cagcacctgc cacctagaaa
 2220
 ctttcttagc aaaaaaatta ataaaaacaa atccattgtc ctcttaaaat atcctttggc
 2280
 ctacagtggg gcctggaatg cgagccaggc cgggtagctt cctcctccag ccctcagggg
 2340
 acttttagta ccgccacctt ggggtagcta caaagcaggg gggtaggtgt ggaaataact
 2400
 gaggcagagg cagggctagg gtgatttttg gccgtgggct ttgaataaat tgctttacca
 2460
 ggcataccag ttctgtggt gacaccagg acagggaccc gttcctcggg ggagcacagt
 2520
 gagcaggggc ctccccaggg tgcaggttga ggctgaggg ctgctcttga gacagtaggg
 2580
 cgtagaggaa ctgggtcctt cccctcctg ggggggtcaaa acctgagcct gggctg
 2636

<210> 2918

<211> 509

<212> PRT

<213> Homo sapiens

<400> 2918

Xaa	Cys	Val	Cys	His	Arg	Trp	Phe	Gln	Pro	Ala	Ile	Pro	Ser	Trp	Leu
1				5					10					15	
Gln	Lys	Thr	Tyr	Asn	Glu	Ala	Leu	Ala	Arg	Val	Gln	Arg	Xaa	Val	Gln
			20					25					30		
Met	Asp	Glu	Leu	Val	Pro	Leu	Gly	Glu	Leu	Thr	Lys	His	Ser	Thr	Ser
		35					40					45			
Ala	Val	Asp	Leu	Ser	Thr	Xaa	Phe	Ala	Gln	Ile	Ser	His	Thr	Ala	Arg
		50					55				60				
Gln	Leu	Asp	Trp	Pro	Asp	Pro	Glu	Glu	Ala	Phe	Met	Ile	Thr	Val	Lys
65					70					75					80
Phe	Val	Glu	Asp	Thr	Cys	Arg	Leu	Ala	Leu	Val	Tyr	Cys	Ser	Leu	Ile
				85					90					95	
Lys	Ala	Arg	Ala	Arg	Glu	Leu	Ser	Ser	Gly	Gln	Lys	Asp	Gln	Gly	Gln
			100					105					110		
Ala	Ala	Asn	Met	Leu	Cys	Val	Val	Val	Asn	Asp	Met	Glu	Gln	Leu	Arg
		115					120					125			
Leu	Val	Ile	Gly	Lys	Leu	Pro	Ala	Gln	Leu	Ala	Trp	Glu	Ala	Leu	Glu
		130				135					140				
Gln	Arg	Val	Gly	Ala	Val	Leu	Glu	Gln	Gly	Gln	Leu	Gln	Asn	Thr	Leu
145					150					155					160
His	Ala	Gln	Leu	Gln	Ser	Ala	Leu	Ala	Gly	Leu	Gly	His	Glu	Ile	Arg
				165					170					175	
Thr	Gly	Val	Arg	Thr	Leu	Ala	Glu	Gln	Leu	Glu	Val	Gly	Ile	Ala	Lys
			180				185						190		
His	Ile	Gln	Lys	Leu	Val	Gly	Val	Arg	Glu	Ser	Val	Leu	Pro	Glu	Asp
		195					200					205			
Ala	Ile	Leu	Pro	Leu	Met	Lys	Phe	Leu	Glu	Val	Glu	Leu	Cys	Tyr	Met

210		215		220
Asn Thr Asn Leu Val Gln Glu Asn Phe Ser Ser Leu Leu Thr Leu Leu				
225		230		235
Trp Thr His Thr Leu Thr Val Leu Val Glu Ala Ala Ala Ser Gln Arg				240
	245		250	255
Ser Ser Ser Leu Ala Ser Asn Arg Leu Lys Ile Ala Leu Gln Asn Leu				
	260		265	270
Glu Ile Cys Phe His Ala Glu Gly Cys Gly Leu Pro Pro Lys Ala Leu				
	275		280	285
His Thr Ala Thr Phe Gln Ala Leu Gln Arg Asp Leu Glu Leu Gln Ala				
	290		295	300
Ala Ser Ser Arg Glu Leu Ile Arg Lys Tyr Phe Cys Ser Arg Ile Gln				
305		310		315
Gln Gln Ala Glu Thr Ser Glu Glu Leu Gly Ala Val Thr Val Lys				
	325		330	335
Ala Ser Tyr Arg Ala Ser Glu Gln Lys Leu Arg Val Glu Leu Leu Ser				
	340		345	350
Ala Ser Ser Leu Leu Pro Leu Asp Ser Asn Gly Ser Ser Asp Pro Phe				
	355		360	365
Val Gln Leu Thr Leu Glu Pro Arg His Glu Phe Pro Glu Leu Ala Ala				
	370		375	380
Arg Glu Thr Gln Lys His Lys Lys Asp Leu His Pro Leu Phe Asp Glu				
385		390		395
Thr Phe Glu Phe Leu Val Pro Ala Glu Pro Cys Arg Lys Ala Gly Ala				
	405		410	415
Cys Leu Leu Leu Thr Val Leu Asp Tyr Asp Thr Leu Gly Ala Asp Asp				
	420		425	430
Leu Glu Gly Glu Ala Phe Leu Pro Leu Arg Glu Val Pro Gly Leu Ser				
	435		440	445
Gly Ser Glu Glu Pro Gly Glu Val Pro Gln Thr Arg Leu Pro Leu Thr				
	450		455	460
Tyr Pro Ala Pro Asn Gly Asp Pro Ile Leu Gln Leu Leu Glu Gly Arg				
465		470		475
Lys Gly Asp Arg Glu Ala Gln Val Phe Val Arg Leu Arg Arg His Arg				
	485		490	495
Ala Lys Gln Ala Ser Gln His Ala Leu Arg Pro Ala Pro				
	500		505	

<210> 2919

<211> 455

<212> DNA

<213> Homo sapiens

<400> 2919

ggatcctcct gctcactgtt taaggagggg acagagtagc tccaggggtgg gagctccacg
60

tttccacagt cttctacgct catcaggggc agcgccgccc ggcacagctg gagaataata
120

aggactagct ttggagacgg gcgttggtca agcagcaggg agaggagttt ggacacacaa
180

gctggctggc tcaggatggc tttacctatg tggctccttg agagatcatt gagaagacta
240

aggacatcct ggagcgcgtc attcccagca gcctgggttg cacagcactc tgtggctcgg
300

gcaagatggt tagtgagaag gctggacacc tgccgggcca gacctgagtg cacagcctct
 360
 gtggagccac cttcctcttt ttcccactca aaacaacgga tggcaagcac ctggaaggca
 420
 gcccaagcca tgggtggccac cttctgcttc ttggt
 455

<210> 2920

<211> 143

<212> PRT

<213> Homo sapiens

<400> 2920

Met	Ala	Trp	Ala	Ala	Phe	Gln	Val	Leu	Ala	Ile	Arg	Cys	Phe	Glu	Trp
1				5					10					15	
Glu	Lys	Glu	Glu	Gly	Gly	Ser	Thr	Glu	Ala	Val	His	Ser	Gly	Leu	Ala
			20					25					30		
Arg	Gln	Val	Ser	Ser	Leu	Leu	Thr	Asn	His	Leu	Ala	Arg	Ala	Thr	Glu
			35				40					45			
Cys	Cys	Gly	Asn	Gln	Ala	Ala	Gly	Asn	Asp	Ala	Leu	Gln	Asp	Val	Leu
	50					55				60					
Ser	Leu	Leu	Asn	Asp	Leu	Ser	Arg	Ser	His	Ile	Gly	Lys	Ala	Ile	Leu
65					70					75				80	
Ser	Gln	Pro	Ala	Cys	Val	Ser	Lys	Leu	Leu	Ser	Leu	Leu	Leu	Asp	Gln
				85				90						95	
Arg	Pro	Ser	Pro	Lys	Leu	Val	Leu	Ile	Ile	Leu	Gln	Leu	Cys	Arg	Ala
			100					105						110	
Ala	Leu	Pro	Leu	Met	Ser	Val	Glu	Asp	Cys	Gly	Asn	Val	Glu	Leu	Pro
		115					120					125			
Pro	Trp	Ser	Tyr	Ser	Val	Pro	Ser	Leu	Asn	Ser	Glu	Gln	Glu	Asp	
	130					135					140				

<210> 2921

<211> 1855

<212> DNA

<213> Homo sapiens

<400> 2921

gggcccggag cggggccttg gaggcccagc ccgcgcggcg acgtctccgc gtggcgctcac
 60
 ggcaccgact gacggccacc caccatggcc gcagaccagc gcccgaggc cgacacgctg
 120
 gccctgaggc aacggctcat cagctcttcc tgcagactct tttttccga ggatcctgtt
 180
 aagattgtcc gggcccaagg gcagtacatg tacgatgaac agggggcaga atacatcgat
 240
 tgcacagca atgtggcgca cgttgggcac tgccaccctc tcgtggtcca agcagcacat
 300
 gagcagaacc aggtgctcaa caccaacagc cggtaacctg atgacaacat cgtggactat
 360
 gcgcagaggg tgctcagagac cctgccggag cagctctgtg tgttctattt cctgaattct
 420
 gggtcagaag ccaatgacct ggccctgagg ctggctcgcc actacacggg acaccaggac
 480

gtggtggtat tagatcatgc gtatcacggc cacctgagct ccctgattga catcagtcctc
540
tacaagttcc gcaacctgga tggccagaag gagggtggtcc acgtggcacc tctcccagac
600
acctaccggg gcccctaccg gnngaggacc accccaaccc agctatggnc ctatgccaac
660
gaggtgaaac gtgtggtcag cagtgcacag gagaaggga ggaagattgc agccttcttc
720
gctgagtctc tgcccagtgt gggagggcag atcattcccc ctgctggcta cttctcccaa
780
gtggcagagc acatccgcaa ggccggagggt gtctttgttg cagatgagat ccagggtggc
840
tttggccggg taggcaagca cttctgggcc ttccagctcc agggaaaaga cttcgtccct
900
gacatcgta ccatgggcaa gtccattggc aacggccacc ctgttgctg cgtggccgca
960
accagcctg tggcgagggc atttgaagcc accggcgttg agtacttcaa cacgtttggg
1020
ggcagccag tgtcctgccc tgtggggctg gccgtcctga atgtcttga gaaggagcag
1080
ctccaggatc atgccaccag tgtaggcagc ttcctgatgc agtcctctg gcagcaaaaa
1140
atcagacatc ccatcgtcgg ggatgtcagg ggtgttgggc tcttcattgg tgtggatctg
1200
atcaaagatg aggccacaag gacaccagca actgaagagg canntgtcta cttggtatca
1260
aggctgaagg agaactacgt tttgctgagc actgatggcc ctgggaggaa catcctgaag
1320
ttaagcccc caatgtgctt cagcctggac aatgcacggc aggtggtggc aaagctggat
1380
gccattctga ctgacatgga agagaagggtg agaagttgtg aaacgctgag gctccagccc
1440
taagccagcc ctgctctgcc taagtgtact ccagaagaaa ctcatctcat ccaaatacac
1500
gctattgaga aggcgagcct gacctccctc ttacagataa agtcagcttt cagaggctca
1560
gggtgggggg gcctgccga ggccataatg ctaccacccc cctcctccta accactggtc
1620
tggttgaata acccagatgt ctgcatcccc tcaagtcagt caatttcctt tctgtccact
1680
gggggtggaa tggggtaggg tgggatactt taaagtgtc ctgcttaaat aaattagacc
1740
agaccagtgt atttctaaag aaaatcctga catgcacacc cattaaaaat agtacatttt
1800
acagtgtccc agtcatactt ttaattggca aattaaaata atgcaatctg aaaaa
1855

<210> 2922

<211> 452

<212> PRT

<213> Homo sapiens

<400> 2922

Met Ala Ala Asp Gln Arg Pro Lys Ala Asp Thr Leu Ala Leu Arg Gln

1	5	10	15
Arg Leu Ile Ser Ser Ser Cys Arg Leu Phe Phe Pro Glu Asp Pro Val			
20	25	30	
Lys Ile Val Arg Ala Gln Gly Gln Tyr Met Tyr Asp Glu Gln Gly Ala			
35	40	45	
Glu Tyr Ile Asp Cys Ile Ser Asn Val Ala His Val Gly His Cys His			
50	55	60	
Pro Leu Val Val Gln Ala Ala His Glu Gln Asn Gln Val Leu Asn Thr			
65	70	75	80
Asn Ser Arg Tyr Leu His Asp Asn Ile Val Asp Tyr Ala Gln Arg Leu			
85	90	95	
Ser Glu Thr Leu Pro Glu Gln Leu Cys Val Phe Tyr Phe Leu Asn Ser			
100	105	110	
Gly Ser Glu Ala Asn Asp Leu Ala Leu Arg Leu Ala Arg His Tyr Thr			
115	120	125	
Gly His Gln Asp Val Val Val Leu Asp His Ala Tyr His Gly His Leu			
130	135	140	
Ser Ser Leu Ile Asp Ile Ser Pro Tyr Lys Phe Arg Asn Leu Asp Gly			
145	150	155	160
Gln Lys Glu Trp Val His Val Ala Pro Leu Pro Asp Thr Tyr Arg Gly			
165	170	175	
Pro Tyr Arg Xaa Arg Thr Thr Pro Thr Gln Leu Trp Xaa Tyr Ala Asn			
180	185	190	
Glu Val Lys Arg Val Val Ser Ser Ala Gln Glu Lys Gly Arg Lys Ile			
195	200	205	
Ala Ala Phe Phe Ala Glu Ser Leu Pro Ser Val Gly Gly Gln Ile Ile			
210	215	220	
Pro Pro Ala Gly Tyr Phe Ser Gln Val Ala Glu His Ile Arg Lys Ala			
225	230	235	240
Gly Gly Val Phe Val Ala Asp Glu Ile Gln Val Gly Phe Gly Arg Val			
245	250	255	
Gly Lys His Phe Trp Ala Phe Gln Leu Gln Gly Lys Asp Phe Val Pro			
260	265	270	
Asp Ile Val Thr Met Gly Lys Ser Ile Gly Asn Gly His Pro Val Ala			
275	280	285	
Cys Val Ala Ala Thr Gln Pro Val Ala Arg Ala Phe Glu Ala Thr Gly			
290	295	300	
Val Glu Tyr Phe Asn Thr Phe Gly Gly Ser Pro Val Ser Cys Ala Val			
305	310	315	320
Gly Leu Ala Val Leu Asn Val Leu Glu Lys Glu Gln Leu Gln Asp His			
325	330	335	
Ala Thr Ser Val Gly Ser Phe Leu Met Gln Leu Leu Trp Gln Gln Lys			
340	345	350	
Ile Arg His Pro Ile Val Gly Asp Val Arg Gly Val Gly Leu Phe Ile			
355	360	365	
Gly Val Asp Leu Ile Lys Asp Glu Ala Thr Arg Thr Pro Ala Thr Glu			
370	375	380	
Glu Ala Xaa Val Tyr Leu Val Ser Arg Leu Lys Glu Asn Tyr Val Leu			
385	390	395	400
Leu Ser Thr Asp Gly Pro Gly Arg Asn Ile Leu Lys Phe Lys Pro Pro			
405	410	415	
Met Cys Phe Ser Leu Asp Asn Ala Arg Gln Val Val Ala Lys Leu Asp			
420	425	430	
Ala Ile Leu Thr Asp Met Glu Glu Lys Val Arg Ser Cys Glu Thr Leu			

435
Arg Leu Gln Pro
450

440

445

<210> 2923
<211> 572
<212> DNA
<213> Homo sapiens

<400> 2923
gccccctccag gagtcacaga tgaggccccc gcagagactg gtgattggtg accctgtcat
60
gtacaggagg gaccctgaaa atgtccttaa agcctcctcc atgtaagaaa ctggcaggcc
120
tggagccct ccccggtggg accaccctcc ttccagcaaa atgccggcca agctcaagga
180
gaaacagcgt ttattgtgga ggggagctgg gcggggctca gcctcggaga actggcagta
240
cagccgcccc agcctcggct ccacccatag ccggaacggg atctccagga tggcagagaa
300
gccttcagcc agcgttgggg cctcgaactg cttcctggca gtggtgggaa cagtggagga
360
cagcctggat catgtggccc agccagtgcc cctgccccct gctatcccca acagtacctg
420
tagccataca tgaccatgtc tgacacgggg atatgagagg agtccgtcat ctctcgaaac
480
cggttgttgt ggcgcgcctg ctccagagtg gcggtgaaga ggaagcagcg gcaggggacg
540
cccgcggctc gggcacactg gacgtacctg gc
572

<210> 2924
<211> 91
<212> PRT
<213> Homo sapiens

<400> 2924
Met Ser Leu Lys Pro Pro Pro Cys Lys Lys Leu Ala Gly Leu Glu Pro
1 5 10 15
Leu Pro Arg Gly Thr Thr Leu Leu Pro Ala Lys Cys Arg Pro Ser Ser
20 25 30
Arg Arg Asn Ser Val Tyr Cys Gly Gly Glu Leu Gly Gly Ala Gln Pro
35 40 45
Arg Arg Thr Gly Ser Thr Ala Ala Pro Ala Ser Ala Pro Pro Ile Ala
50 55 60
Gly Thr Gly Ser Pro Gly Trp Gln Arg Ser Leu Gln Pro Ala Leu Gly
65 70 75 80
Pro Arg Thr Ala Ser Trp Gln Trp Trp Glu Gln
85 90

<210> 2925
<211> 1999
<212> DNA
<213> Homo sapiens

<400> 2925

ngcgcgccag ggggggggctg ctgggggtggt tgtcgcagcg ggtttttcctc ggcggtttgc
60
ggagctgcta ggatggagca ggttgcggag ggagcaaggg tgaccgcagt ccctgtgtca
120
gctgccgaca gcaactgagga gttggccgaa gtcgaagaag gagttggagt agtgggcgaa
180
gataatgacg cagccgcgag aggagcggag gcctttggcg acagtgagga ggacggagag
240
gatgtgttcg aggtggagaa gatcctggac atgaagaccg aggggggtaa agttcctttac
300
aaagttcgct ggaaaggcta tacatcggat gatgatacct gggagcccga gattcacctg
360
gaggactgta aagaagtgct tcttgaattt aggaagaaaa ttgcagagaa caaagccaaa
420
gcagtcagga aggatattca gagactatcc ttaaataacg acatatttga ggcgaactct
480
gatagcgatc agcaaagtga gacaaaagaa gatacttccc caaagaagaa aaagaaaaaa
540
ttgaggcaga gagaagagaa aagcccagat gatctgaaaa agaaaaaagc aaaggccggg
600
aagctaaaag acaagtccaa accagacctg gagagctcct tggaaagttt agtttttgat
660
ttaaggacaa agaaaagaat ttctgaagcc aaagaagaac taaaggagtc caaaaagccc
720
aaaaaagatg aagtaaaaga aacaaaagaa ttaaagaaag ttaaaaaggg tgaaataaga
780
gatttaaaga cgaaaacaag agaagatccc aaagaaaata gaaaaacaaa aaaagaaaaa
840
tttgtcgaat cccaggtgga atctgaatca agtgtactta atgattctcc ctttccagag
900
gatgacaatg aaggggctaca ttccgacagc agagaagaga aacaaaacac taagagtgca
960
agagagagag cagggcgagga catggggctg gagcatggct ttgagaagcc cctagacagt
1020
gccatgagtg ctgaggagga taccgatgtc agaggcagga ggaaaaagaa gaccccgaga
1080
aaggctgagg aactagaga gaacaggaag ctagagaaca agaacgcttt cttagagaag
1140
aaaactgtgc ctaaaaagca gaggaatcaa gacagaagca aaagtgtgc agagttagag
1200
aagctgatgc ctgtatctgc ccaaacgcca aaggggccgga ggttgagcgg ggaagagaga
1260
ggcctctggt ccacggactc agccgaggag gacaaagaaa ccaaagaaa tgaatccaaa
1320
gaaaaatatc agaaaaggca tgattctgac aaggaagaaa aaggcagaaa agagccaaaa
1380
ggattaaaga cacttaagga aatcagaaat gcatttgatt tatttaaatt aactccagaa
1440
gaaaaaaatg atgtttctga gaataatcgg aaaagggaag aaataccact ggattttaaa
1500
accatagacg atcacaaaac caaggaaaac aaacagtcac ttaaagaaag gagaaacacc
1560

agagacgaaa cggatacttg ggcatacatt gctgcagaag gtgatcagga ggtttttagac
 1620
 agcgtgtgcc aagcagatga gaattcaggt gagtttggaa tcatttttgta gaattttttca
 1680
 aggtagtgca ccatattatt ttactgtact cttctctgta tttctgatct caacgatcaa
 1740
 aaaataatgg agtcgaagag tttatttggga tctcctgaat aaataacatt ttatattgaa
 1800
 gacgggtcat tctgtgactt ctcaatggat caaacaattt ttctgagttc ctataatggt
 1860
 ctcagcacgt atagaaatta aaagatttct gattttctac cttacctact cttacctggc
 1920
 agcccccattt tatatcttac tatttaatag atttctttca ggaaattatc aaatataaac
 1980
 ttatttgtat tttaccctt
 1999

<210> 2926

<211> 305

<212> PRT

<213> Homo sapiens

<400> 2926

Lys	Lys	Val	Lys	Lys	Gly	Glu	Ile	Arg	Asp	Leu	Lys	Thr	Lys	Thr	Arg
1				5					10					15	
Glu	Asp	Pro	Lys	Glu	Asn	Arg	Lys	Thr	Lys	Lys	Glu	Lys	Phe	Val	Glu
			20					25					30		
Ser	Gln	Val	Glu	Ser	Glu	Ser	Ser	Val	Leu	Asn	Asp	Ser	Pro	Phe	Pro
			35				40					45			
Glu	Asp	Asp	Asn	Glu	Gly	Leu	His	Ser	Asp	Ser	Arg	Glu	Glu	Lys	Gln
	50					55					60				
Asn	Thr	Lys	Ser	Ala	Arg	Glu	Arg	Ala	Gly	Gln	Asp	Met	Gly	Leu	Glu
65					70					75					80
His	Gly	Phe	Glu	Lys	Pro	Leu	Asp	Ser	Ala	Met	Ser	Ala	Glu	Glu	Asp
				85					90					95	
Thr	Asp	Val	Arg	Gly	Arg	Arg	Lys	Lys	Lys	Thr	Pro	Arg	Lys	Ala	Glu
			100					105					110		
Asp	Thr	Arg	Glu	Asn	Arg	Lys	Leu	Glu	Asn	Lys	Asn	Ala	Phe	Leu	Glu
	115					120					125				
Lys	Lys	Thr	Val	Pro	Lys	Lys	Gln	Arg	Asn	Gln	Asp	Arg	Ser	Lys	Ser
	130					135					140				
Ala	Ala	Glu	Leu	Glu	Lys	Leu	Met	Pro	Val	Ser	Ala	Gln	Thr	Pro	Lys
145					150					155					160
Gly	Arg	Arg	Leu	Ser	Gly	Glu	Glu	Arg	Gly	Leu	Trp	Ser	Thr	Asp	Ser
			165						170					175	
Ala	Glu	Glu	Asp	Lys	Glu	Thr	Lys	Arg	Asn	Glu	Ser	Lys	Glu	Lys	Tyr
			180					185					190		
Gln	Lys	Arg	His	Asp	Ser	Asp	Lys	Glu	Glu	Lys	Gly	Arg	Lys	Glu	Pro
	195						200					205			
Lys	Gly	Leu	Lys	Thr	Leu	Lys	Glu	Ile	Arg	Asn	Ala	Phe	Asp	Leu	Phe
	210					215					220				
Lys	Leu	Thr	Pro	Glu	Glu	Lys	Asn	Asp	Val	Ser	Glu	Asn	Asn	Arg	Lys
225					230					235				240	
Arg	Glu	Glu	Ile	Pro	Leu	Asp	Phe	Lys	Thr	Ile	Asp	Asp	His	Lys	Thr

				245						250					255				
Lys	Glu	Asn	Lys	Gln	Ser	Leu	Lys	Glu	Arg	Arg	Asn	Thr	Arg	Asp	Glu				
			260						265					270					
Thr	Asp	Thr	Trp	Ala	Tyr	Ile	Ala	Ala	Glu	Gly	Asp	Gln	Glu	Val	Leu				
		275					280					285							
Asp	Ser	Val	Cys	Gln	Ala	Asp	Glu	Asn	Ser	Gly	Glu	Phe	Gly	Ile	Ile				
	290					295					300								
Leu																			
305																			

<210> 2927

<211> 1084

<212> DNA

<213> Homo sapiens

<400> 2927

```

nnctcgagtt tcgctgggct acggagcaca aaggtccggg cgggccattc gggatgtcgt
60
agggcgccct gggatgtgag gggcctgcgg gatctgtccc tgaggcctgc cactttttct
120
ggtgttaact gtctggccta tgatgaagcc atcatggctc agcaggaccg aattcagcaa
180
gagattgctg tgcagaaccc tctggtgtca gagcggctgg agctctcggg cctatacaag
240
gagtatgctg aagatgacaa catctatcaa cagaagatca aggacctcca caaaaagtac
300
tcgtacatcc gcaagaccag gcctgacggc aactgtttct atcgggcttt cggattctcc
360
cacttggagg cactgctgga tgacagcaag gagttgcagc ggttcaaggc tgtgtctgcc
420
aagagcaagg aagacctggt gtcccagggc ttactgaat tcacaattga ggatttccac
480
aacacgttca tggacctgat tgagcagggtg gagaagcaga cctctgtcgc cgacctgctg
540
gcctccttca atgaccagag cacctccgac taccttgtgg tctacctgcg gctgctcacc
600
tcgggctacc tgcagcgcga gagcaagttc ttcgagcact tcatcgaggg tggacggact
660
gtcaaggagt tctgccagca ggaggtggag cccatgtgca aggagagcga ccacatccac
720
atcattgcgc tggcccaggc cctcagcgtg tccatccagg tggagtacat ggaccgcggc
780
gagggcgga ccaccaatcc gcacatcttc cctgagggt ccgagcccaa ggtctacctt
840
ctctaccggc ctggacacta cgatatcctc taaaaatagg gctgggtcca gcccgtgct
900
gcctgtctgc cccctctctc caggcgctag acatgtacag aggtttttct gtggttgtaa
960
atggtcctat ttcacccctt tcttctgtc acatgacccc ccccatgtt ttattaaagg
1020
gggtgctggt ggtgaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
1080
aaaa
1084

```

<210> 2928
 <211> 292
 <212> PRT
 <213> Homo sapiens

<400> 2928
 Xaa Ser Ser Phe Ala Gly Leu Arg Ser Thr Lys Val Arg Ala Gly His
 1 5 10 15
 Ser Gly Cys Arg Arg Arg Pro Trp Asp Val Arg Gly Leu Arg Asp Leu
 20 25 30
 Ser Leu Arg Pro Ala Thr Phe Ser Gly Val Asn Cys Leu Ala Tyr Asp
 35 40 45
 Glu Ala Ile Met Ala Gln Gln Asp Arg Ile Gln Gln Glu Ile Ala Val
 50 55 60
 Gln Asn Pro Leu Val Ser Glu Arg Leu Glu Leu Ser Val Leu Tyr Lys
 65 70 75 80
 Glu Tyr Ala Glu Asp Asp Asn Ile Tyr Gln Gln Lys Ile Lys Asp Leu
 85 90 95
 His Lys Lys Tyr Ser Tyr Ile Arg Lys Thr Arg Pro Asp Gly Asn Cys
 100 105 110
 Phe Tyr Arg Ala Phe Gly Phe Ser His Leu Glu Ala Leu Leu Asp Asp
 115 120 125
 Ser Lys Glu Leu Gln Arg Phe Lys Ala Val Ser Ala Lys Ser Lys Glu
 130 135 140
 Asp Leu Val Ser Gln Gly Phe Thr Glu Phe Thr Ile Glu Asp Phe His
 145 150 155 160
 Asn Thr Phe Met Asp Leu Ile Glu Gln Val Glu Lys Gln Thr Ser Val
 165 170 175
 Ala Asp Leu Leu Ala Ser Phe Asn Asp Gln Ser Thr Ser Asp Tyr Leu
 180 185 190
 Val Val Tyr Leu Arg Leu Leu Thr Ser Gly Tyr Leu Gln Arg Glu Ser
 195 200 205
 Lys Phe Phe Glu His Phe Ile Glu Gly Gly Arg Thr Val Lys Glu Phe
 210 215 220
 Cys Gln Gln Glu Val Glu Pro Met Cys Lys Glu Ser Asp His Ile His
 225 230 235 240
 Ile Ile Ala Leu Ala Gln Ala Leu Ser Val Ser Ile Gln Val Glu Tyr
 245 250 255
 Met Asp Arg Gly Glu Gly Gly Thr Thr Asn Pro His Ile Phe Pro Glu
 260 265 270
 Gly Ser Glu Pro Lys Val Tyr Leu Leu Tyr Arg Pro Gly His Tyr Asp
 275 280 285
 Ile Leu Tyr Lys
 290

<210> 2929
 <211> 4920
 <212> DNA
 <213> Homo sapiens

<400> 2929
 cggcgcccg gggctgggag ccggggcccg caggtggaag cgcacccggg aggcgggccc
 60

gccggggctg gagcgggctcg ggcgggctct tgacgctcag ccagcttcgc tccggcctcg
120
ggaaggcgcg cgtccccgcc tgaccgcgcg gcctctccca cccagcagt gacgcgcccg
180
ctgggagctg gagccccgcg agcgccccgc agggcgatgg acggccgaac cccgcgcccc
240
caggacgccc cagccaggag aaaacaaaa gccaaaggcac cacttcctcc agctgagacc
300
aaatatactg atgtctcttc agctgctgat tctgtagaat ccactgcttt catcatggaa
360
cagaaagaaa acatgataga taaagacgtt gaactctcag tggtcctacc tggggatatt
420
atcaaactca ctactgttca tggcagtaaa cctatgatgg acttggtgat attcctttgt
480
gcacagtatc acttaaattc atcaagttac acaatcgatc tgttgtcagc tgaacagaac
540
cacattaaat ttaagccaaa cacaccaata ggaatgttgg aggtagagaa ggtaatttta
600
aagccaaaaa tgttggataa gaaaaaacct acacctataa taccagagaa aactgtgaga
660
gtagtgatta attttaagaa aacacagaag accatagtga gagtgagtc acatgcatcg
720
cttcaagagc ttgcccctat tatatgtagc aaatgtgagt ttgatccgtt gcatacacta
780
ttgttgaaag attatcaatc gcaggagcct cttgacttga caaaatctct taatgacctg
840
ggactaagag aatttatatgc gatggatgtc aacagagagt cctgccaaat atcacaaaac
900
ctagatatta tgaaggagaa agaaaataaa gggtttttca gtttttttca acgcagtaag
960
aaaaagcgag accaaaactgc aagtgccctt gcaaccctc tagtaaataa gcaccgcccc
1020
actttttaca ggtccaatac cattttccaa ccatatattt ccaacacctt gccgtcggat
1080
gcacccaaga agaggcgggc tccactgcc ccgatgccag catctcagag tgtcccccaa
1140
gaccttgcac acatccagga gaggcctgct tcttgatatag tgaaatccat gagcgtggat
1200
gagacagata agagtccctg tgaagcagga agagtgaggg caggttcact gcagctcagc
1260
agcatgtctg cagggaaattc atctttgaga aggacaaagc gaaaagcacc ttccccaccc
1320
tccaaaatac ccccgcatca aagtgatgaa aatagtcgtg tgactgcctt acagccagta
1380
gatggagtgc ctccagacag tgcttcagaa gcaaactctc ctgaggagct atccagccca
1440
gaaacctttc accctgggct ttccagtcag gagcagtgc ctgcgcccaa actgatggag
1500
gaaacctctg tctttgagtg ccctgggaca cctgaggcag ccataacatc attgacatct
1560
ggaataagct ctgattatag ccttgaagag atagatgaaa aggaagaact gagtgaagtg
1620
cctaaagttg aagctgaaaa tatttctccg aagtcacaag atattccttt tgtatctact
1680

gatataataa atacactgaa aaatgatcct gactcagccc ttggcaatgg tagtggagag
1740
ttctcacaaa actccatgga agaaaaacaa gaaactaaaa gcacagatgg acaagaacca
1800
cacagtgtag tatatgatac aagcaatgga aagaaggtag ttgacagtat aagaaacttg
1860
aagtcgttgg gcccaaacca agagaatggt caaaatgaaa taattgtcta tccagagAAC
1920
acagaagaca atatgaaaaa tggagtgaag aaaacagaaa tcaatgtaga aggtgttgcc
1980
aaaaataaca acattgatat ggaagttgag agaccatcaa actctgagggc acatgaaact
2040
gatactgcta taagttacaa ggaaaacccat ctagcagctt catcagtacc agatcaaaaa
2100
ctgaatcaac ccagtgcaga aaagacaaaa gatgcagcaa ttcagacaac cccttcttgt
2160
aacagttttg atgggaaaca ccaagatcat aatttatctg actccaaagt tgaagaatgt
2220
gtgcaaactt caaataacaa catatcaact caacactcat gcttaagttc acaagattct
2280
gtaaatacct caaggggaatt caggagtcaa ggcaccctaa ttatacatte agaagatccg
2340
cttaccgtaa aagatccaat ttgtgcacat ggtaatgatg atcttttgcc tctgttagat
2400
aggattgaca aaaattccac tgcttcttac ctaaagaatt acccacttta tagacaggac
2460
tacaatccca agccaaaacc ttcaaataaa attacacgag agtatatacc caaaattggc
2520
atgactactt ataaaatagt gcctcccaaa tccttggaag tatcgaaaga ctggcaatca
2580
gaaaccatag agtataaaga tgatcaggac atgcatgctt tagggaaaaa gcacactcat
2640
gagaatgtga aagaaactgc catccaaaca gaagattctg ctatttctga aagcccagaa
2700
gagccactgc caaaccttaa accgaagcct aacctgagaa cagagcatca agtgcccagt
2760
tctgtgagct cacctgatga tgccatgggt agtcctctga aacctgctcc caaaatgaca
2820
agagacactg gcacagctcc ttttgcacca aatttggaag aaataaaca tattttggaa
2880
tcaaaattta aatctcgggc ttcaaataaa caggccaaac ccagctcttt ttttttgcag
2940
atgcagaaga gagtatcggg tcaactatgtg acatctgcag ctgccaagag tgtccatgct
3000
gccctaatc ctgctccaaa agaactgaca aataaagagg cagaaagggg tatgctgcct
3060
tctccggagc agactctttc tcccttaagt aaaatgcctc actctgttcc acaaccctt
3120
gttgaaaaaa ctgatgatga tgtcatcggt caggctcctg ctgaagcctc cctcctccc
3180
atagctccaa aacctgtgac aattcctgct agtcaggtat ccacacaaaa tctgaagact
3240
ttgaaaactt ttggtgcccc acgaccatac tcaagttctg gtccttcacc gtttgcctt
3300

gctgtagtga aaaggtcaca gtctttcagt aaagagcgca ccgagtcacc tagtgccagt
3360
gcattggtcc aacctccagc caacacagag gaagggaaga ctcatctctgt aaataaattt
3420
gtggacatcc cacagcttgg tgtgtctgat aaggaaaata actctgcaca taatgaacag
3480
aattcccaaa taccaactcc aactgatggc ccatcattca ctgttatgag acaaagttct
3540
ttaacattcc aaagctctga cccagaacag atgcgacaga gtttgctgac tgcaatccgt
3600
tcgggagagg ctgctgccaa attgaaaagg gttaccattc catcaaatac aatatctgtg
3660
aatggaaggt caagactcag ccattccatg tcccctgatg cccaggacgg ccattaaatg
3720
ttaccctgcc acaccactgc acttcacttc cacttcagac caacttcata ctaatggaac
3780
attttgccaa atgtatatcc agatgtacac taatatatta tctattaaaa tattagaatt
3840
tgtgttggtg cttttaatgc cagaagaaaa gttaccagaa tttataattt atagtaattt
3900
tttgatcttt tttttgcctt aagagttgaa tatgctgctt tagaacttta aaacaagggtg
3960
taaattgattt tcatttttta caaatgaaaa ataattcctt tgtattgatt tcacttacca
4020
gcacattctc tacaatggtg acttagacaa aagtataaga ttcatagact ttatatattgt
4080
atgacataca actaggacaa acatagatat gacatttgct gcctcagtgt agcaattgga
4140
aatatttata agttatatga aagcctgttt tgggctgaaa gaattattta gaaaactagt
4200
gataccaaat aagtatatcc agttcaataa ttattttcaa tgatgaatca cttagtgtga
4260
aagacttgcc ttgtgtattc tttatgtaat tacaaatcac tgtcaatttt atgggaagct
4320
catagtattt taatatattt ttaacatgga actcttgttt ttttaattct tagaacttaa
4380
attctacaat aattttaaat attttctgta tataattatg acattgtcac acagaaatta
4440
cacattttat gtgccagaag ccttaaacad ctttctgtga aaatgctgat atattgtgac
4500
agttatttca catttgatat gtagagagga ataggggtta gtttatgttt atattgaaaa
4560
actttaaaga ctatttgga gttccagaaa ttctggtttt aattcaagta aaatgataaa
4620
atagtcatta tatagttcag atgctaatat tctaagtaat aatatatatt tacattgaag
4680
ctaaaactgt taagcaaaac aatgcccatt tgtcggctta cagctcttcc ggagtctaga
4740
gcctgttggt gttctgtccc tactttaaga atttaattgc tcacttattc tgaaagcttt
4800
gttcaaacia gatgatatta aatttgtttt cactaaaact actgggatat ctgcctcttg
4860
gggatttttt tttcaattta ataaaagcaa gttgtatatt tgggggtgctt tttaaaatat
4920

<210> 2930
 <211> 1166
 <212> PRT
 <213> Homo sapiens

<400> 2930

```

Met Asp Gly Arg Thr Pro Arg Pro Gln Asp Ala Pro Ala Arg Arg Lys
 1          5          10          15
Pro Lys Ala Lys Ala Pro Leu Pro Pro Ala Glu Thr Lys Tyr Thr Asp
      20          25          30
Val Ser Ser Ala Ala Asp Ser Val Glu Ser Thr Ala Phe Ile Met Glu
      35          40          45
Gln Lys Glu Asn Met Ile Asp Lys Asp Val Glu Leu Ser Val Val Leu
      50          55          60
Pro Gly Asp Ile Ile Lys Ser Thr Thr Val His Gly Ser Lys Pro Met
65          70          75          80
Met Asp Leu Leu Ile Phe Leu Cys Ala Gln Tyr His Leu Asn Pro Ser
      85          90          95
Ser Tyr Thr Ile Asp Leu Leu Ser Ala Glu Gln Asn His Ile Lys Phe
      100          105          110
Lys Pro Asn Thr Pro Ile Gly Met Leu Glu Val Glu Lys Val Ile Leu
      115          120          125
Lys Pro Lys Met Leu Asp Lys Lys Lys Pro Thr Pro Ile Ile Pro Glu
      130          135          140
Lys Thr Val Arg Val Val Ile Asn Phe Lys Lys Thr Gln Lys Thr Ile
      145          150          155          160
Val Arg Val Ser Pro His Ala Ser Leu Gln Glu Leu Ala Pro Ile Ile
      165          170          175
Cys Ser Lys Cys Glu Phe Asp Pro Leu His Thr Leu Leu Leu Lys Asp
      180          185          190
Tyr Gln Ser Gln Glu Pro Leu Asp Leu Thr Lys Ser Leu Asn Asp Leu
      195          200          205
Gly Leu Arg Glu Leu Tyr Ala Met Asp Val Asn Arg Glu Ser Cys Gln
      210          215          220
Ile Ser Gln Asn Leu Asp Ile Met Lys Glu Lys Glu Asn Lys Gly Phe
      225          230          235          240
Phe Ser Phe Phe Gln Arg Ser Lys Lys Lys Arg Asp Gln Thr Ala Ser
      245          250          255
Ala Pro Ala Thr Pro Leu Val Asn Lys His Arg Pro Thr Phe Thr Arg
      260          265          270
Ser Asn Thr Ile Ser Lys Pro Tyr Ile Ser Asn Thr Leu Pro Ser Asp
      275          280          285
Ala Pro Lys Lys Arg Arg Ala Pro Leu Pro Pro Met Pro Ala Ser Gln
      290          295          300
Ser Val Pro Gln Asp Leu Ala His Ile Gln Glu Arg Pro Ala Ser Cys
      305          310          315          320
Ile Val Lys Ser Met Ser Val Asp Glu Thr Asp Lys Ser Pro Cys Glu
      325          330          335
Ala Gly Arg Val Arg Ala Gly Ser Leu Gln Leu Ser Ser Met Ser Ala
      340          345          350
Gly Asn Ser Ser Leu Arg Arg Thr Lys Arg Lys Ala Pro Ser Pro Pro
      355          360          365
Ser Lys Ile Pro Pro His Gln Ser Asp Glu Asn Ser Arg Val Thr Ala

```

370		375		380
Leu Gln Pro Val Asp Gly	Val Pro Pro Asp Ser	Ala Ser Glu Ala Asn		
385	390	395	400	
Ser Pro Glu Glu Leu Ser	Ser Pro Glu Thr Phe	His Pro Gly Leu Ser		
405	410	415		
Ser Gln Glu Gln Cys Thr	Ala Pro Lys Leu Met	Glu Glu Thr Ser Val		
420	425	430		
Phe Glu Cys Pro Gly Thr	Pro Glu Ala Ala Ile	Thr Ser Leu Thr Ser		
435	440	445		
Gly Ile Ser Ser Asp Tyr	Ser Leu Glu Glu Ile	Asp Glu Lys Glu Glu		
450	455	460		
Leu Ser Glu Val Pro Lys	Val Glu Ala Glu Asn	Ile Ser Pro Lys Ser		
465	470	475	480	
Gln Asp Ile Pro Phe Val	Ser Thr Asp Ile Ile	Asn Thr Leu Lys Asn		
485	490	495		
Asp Pro Asp Ser Ala Leu	Gly Asn Gly Ser Gly	Glu Phe Ser Gln Asn		
500	505	510		
Ser Met Glu Glu Lys Gln	Glu Thr Lys Ser Thr	Asp Gly Gln Glu Pro		
515	520	525		
His Ser Val Val Tyr Asp	Thr Ser Asn Gly Lys	Lys Val Val Asp Ser		
530	535	540		
Ile Arg Asn Leu Lys Ser	Leu Gly Pro Asn Gln	Glu Asn Val Gln Asn		
545	550	555	560	
Glu Ile Ile Val Tyr Pro	Glu Asn Thr Glu Asp	Asn Met Lys Asn Gly		
565	570	575		
Val Lys Lys Thr Glu Ile	Asn Val Glu Gly Val	Ala Lys Asn Asn Asn		
580	585	590		
Ile Asp Met Glu Val Glu	Arg Pro Ser Asn Ser	Glu Ala His Glu Thr		
595	600	605		
Asp Thr Ala Ile Ser Tyr	Lys Glu Asn His Leu	Ala Ala Ser Ser Val		
610	615	620		
Pro Asp Gln Lys Leu Asn	Gln Pro Ser Ala Glu	Lys Thr Lys Asp Ala		
625	630	635	640	
Ala Ile Gln Thr Thr Pro	Ser Cys Asn Ser Phe	Asp Gly Lys His Gln		
645	650	655		
Asp His Asn Leu Ser Asp	Ser Lys Val Glu Glu	Cys Val Gln Thr Ser		
660	665	670		
Asn Asn Asn Ile Ser Thr	Gln His Ser Cys Leu	Ser Ser Gln Asp Ser		
675	680	685		
Val Asn Thr Ser Arg Glu	Phe Arg Ser Gln Gly	Thr Leu Ile Ile His		
690	695	700		
Ser Glu Asp Pro Leu Thr	Val Lys Asp Pro Ile	Cys Ala His Gly Asn		
705	710	715	720	
Asp Asp Leu Leu Pro Pro	Val Asp Arg Ile Asp	Lys Asn Ser Thr Ala		
725	730	735		
Ser Tyr Leu Lys Asn Tyr	Pro Leu Tyr Arg Gln	Asp Tyr Asn Pro Lys		
740	745	750		
Pro Lys Pro Ser Asn Glu	Ile Thr Arg Glu Tyr	Ile Pro Lys Ile Gly		
755	760	765		
Met Thr Thr Tyr Lys Ile	Val Pro Pro Lys Ser	Leu Glu Ile Ser Lys		
770	775	780		
Asp Trp Gln Ser Glu Thr	Ile Glu Tyr Lys Asp	Asp Gln Asp Met His		
785	790	795	800	
Ala Leu Gly Lys Lys His	Thr His Glu Asn Val	Lys Glu Thr Ala Ile		

BNSDOCID: <WO 0058473A2_1_>

ccaatgtcca ctttgtctct ttggcccggc tcactcttct ccttaccctg agatgtgctg
 120
 ttagagatct tcgaagccat attttctcca gatgttttgg gatgaggaga cacaacaaca
 180
 gtgttttttag gttcactctg atgagttgcc atgaaatcaa accaatctaa actgtcatct
 240
 ctgttatttt tgtgctgagc tgaatgtttc ctacttggtg atctattagg ctccagatgc
 300
 ggtgggggat ctagaactgg gcttccctcg gggctgcctc caggagagaa gatatgtgtg
 360
 agccaggcca aaggagcaaa gtggacattg ggttgcttcc atcaccagga gagacagggtg
 420
 ttccatggag ggcagacaat gtggaaagta acaagaaaaa aaggctagca ctagattctg
 480
 aagcagcagt ctctgctgat aaaccagact cagtactgac tcatcatgtc cccaggaacc
 540
 tgcagaagct gtgcaaagag agggcccaga agttgtgcag aaatagcacc aggggtgctg
 600
 cacagtgcac agtcccttca cgcgt
 625

<210> 2932
 <211> 90
 <212> PRT
 <213> Homo sapiens

<400> 2932
 Met Cys Glu Pro Gly Gln Arg Ser Lys Val Asp Ile Gly Leu Leu Pro
 1 5 10 15
 Ser Pro Gly Glu Thr Gly Val Pro Trp Arg Ala Asp Asn Val Glu Ser
 20 25 30
 Asn Lys Lys Lys Arg Leu Ala Leu Asp Ser Glu Ala Ala Val Ser Ala
 35 40 45
 Asp Lys Pro Asp Ser Val Leu Thr His His Val Pro Arg Asn Leu Gln
 50 55 60
 Lys Leu Cys Lys Glu Arg Ala Gln Lys Leu Cys Arg Asn Ser Thr Arg
 65 70 75 80
 Val Pro Ala Gln Cys Thr Val Pro Ser Arg
 85 90

<210> 2933
 <211> 688
 <212> DNA
 <213> Homo sapiens

<400> 2933
 caattgcgcc aagaacttaa aacagtgaaa aaaaattatg aagctctcaa acagagacaa
 60
 gatgaggaaa ggatggtaca gagctctcct ccaatatctg gtgaagacaa caaatgggag
 120
 cgagaaaagtc aagaaacgac tagagaactt ctgaaagtta aagacagatt aattgaagta
 180
 gaaagaaata atgctacact gcaagcagag aagcaagcgt tgaaaactca actgaagcaa
 240

cttgagacac agaacaataa tttgcaggct cagattcttg cacttcagag gcagacagtg
 300
 tcattacaag aacagaatac cactcttcaa acacagaatg ccaagcttca ggttgaaaat
 360
 tccaccctta attcccaaag tacctcactc atgaaccaga atgcccaact cctaattccag
 420
 cagtcttcct tagaaaatga aaatgaatct gtaatcaaag agcgagaaga cctaaaatct
 480
 ctctatgatt ctctgatcaa agatcatgaa aagctggaac ttcttcatga acgtcaggct
 540
 tcagagtatg aatctcttat ctctaaacat ggaactctga agtctgccca caaaaatctt
 600
 gaggtggaac atagagacct tgaagaccgt tacaatcagt tattaaaaca gaaaggacag
 660
 ttggaagatt tggaaaaaat gctcaaag
 688

<210> 2934

<211> 229

<212> PRT

<213> Homo sapiens

<400> 2934

Gln	Leu	Arg	Gln	Glu	Leu	Lys	Thr	Val	Lys	Lys	Asn	Tyr	Glu	Ala	Leu
1				5					10					15	
Lys	Gln	Arg	Gln	Asp	Glu	Glu	Arg	Met	Val	Gln	Ser	Ser	Pro	Pro	Ile
			20					25					30		
Ser	Gly	Glu	Asp	Asn	Lys	Trp	Glu	Arg	Glu	Ser	Gln	Glu	Thr	Thr	Arg
	35						40					45			
Glu	Leu	Leu	Lys	Val	Lys	Asp	Arg	Leu	Ile	Glu	Val	Glu	Arg	Asn	Asn
	50					55					60				
Ala	Thr	Leu	Gln	Ala	Glu	Lys	Gln	Ala	Leu	Lys	Thr	Gln	Leu	Lys	Gln
65					70					75					80
Leu	Glu	Thr	Gln	Asn	Asn	Asn	Leu	Gln	Ala	Gln	Ile	Leu	Ala	Leu	Gln
				85					90					95	
Arg	Gln	Thr	Val	Ser	Leu	Gln	Glu	Gln	Asn	Thr	Thr	Leu	Gln	Thr	Gln
			100					105					110		
Asn	Ala	Lys	Leu	Gln	Val	Glu	Asn	Ser	Thr	Leu	Asn	Ser	Gln	Ser	Thr
		115					120				125				
Ser	Leu	Met	Asn	Gln	Asn	Ala	Gln	Leu	Leu	Ile	Gln	Gln	Ser	Ser	Leu
	130					135					140				
Glu	Asn	Glu	Asn	Glu	Ser	Val	Ile	Lys	Glu	Arg	Glu	Asp	Leu	Lys	Ser
145					150					155					160
Leu	Tyr	Asp	Ser	Leu	Ile	Lys	Asp	His	Glu	Lys	Leu	Glu	Leu	Leu	His
				165					170					175	
Glu	Arg	Gln	Ala	Ser	Glu	Tyr	Glu	Ser	Leu	Ile	Ser	Lys	His	Gly	Thr
			180					185					190		
Leu	Lys	Ser	Ala	His	Lys	Asn	Leu	Glu	Val	Glu	His	Arg	Asp	Leu	Glu
		195					200					205			
Asp	Arg	Tyr	Asn	Gln	Leu	Leu	Lys	Gln	Lys	Gly	Gln	Leu	Glu	Asp	Leu
		210				215						220			
Glu	Lys	Met	Leu	Lys											
225															

<210> 2935
<211> 1200
<212> DNA
<213> Homo sapiens

<400> 2935
ngacacaata gggcattcaa gtcactgggg aaatatggcc tcttttcttg gaccatttta
60
tttgaaggta tgggggaacg aaaaaaatac tattatggag tgcagtgcac agtttgcag
120
aactctaaaa gataaagcaa gaaatgtcaa gtaggttttg cacattgggc tgctttaggc
180
tgtgccctct gattcttctg gtgtactcat gatactctcc cttggtgccc tccaggctga
240
cgcagctatt tacgttcaga gtgaaatggg ctgtgtggct gggattggga aaggccttgt
300
taaagctggg agaggtttgg tcatggtgac aggggacctg aaggcccagc tcctcttccc
360
tcttgccaat acagggacaa gttaaagaag aagaagaaag taaaggtaaa gatggaaaag
420
aaatccacgc cctctagggg ctcatcatcc aagtcgtcct caaggcagct aagcgagagc
480
ttcaagagca aagagtttgt gtctagtgat gagagctctt cgggagagaa caagagcaaa
540
aagaagagga ggaggagcga ggactctgaa gaagaagaac tagccagtac tccccccagc
600
tcagaggact cagcgtcagg atccgatgag tagaaacgga ggaaggttct ctttgcgctt
660
gccttctcac acccccgga agtcagcagg gaaacgcaga gaactcctat gaaccaccaa
720
aaggctgtaa atgatgaaac atgcaaagct agccacataa catcaagtgt ctttccttca
780
gcctctctcg gtaaagcatc atctcgaaag ccatttggga tcctttctcc aaatgttctg
840
tgcagtatga gtgggaagag tcctgtagag agcagcttga atgttaaaac caaaaagaat
900
gcaccatctg caacgatcca ccagggcgaa gaagaaggac cacttgatat ctgggctgtt
960
gtgaaacctg gaaataccaa ggaaaaaatt gcattctttg catcccacca gtgtagtaac
1020
aggataggat ctatgaaaat aaaaagtcc tgggatattg atgggagagc tactaagaga
1080
aggaaaaaat caggggatct taaaaagcc aaggtacagg tggaaaggat gagggaggtt
1140
aacagcaggt gctaccaacc tgagcctttt gcatgtggca ttgagcactg ttctgtgcac
1200

<210> 2936
<211> 109
<212> PRT
<213> Homo sapiens

<400> 2936
Ser Trp Glu Arg Phe Gly His Gly Asp Arg Gly Pro Glu Gly Pro Ala

1	5	10	15
Pro Leu Pro Ser Cys Gln Tyr Arg Asp Lys Leu Lys Lys Lys Lys Lys			
20	25	30	
Val Lys Val Lys Met Glu Lys Lys Ser Thr Pro Ser Arg Gly Ser Ser			
35	40	45	
Ser Lys Ser Ser Ser Arg Gln Leu Ser Glu Ser Phe Lys Ser Lys Glu			
50	55	60	
Phe Val Ser Ser Asp Glu Ser Ser Ser Gly Glu Asn Lys Ser Lys Lys			
65	70	75	80
Lys Arg Arg Arg Ser Glu Asp Ser Glu Glu Glu Glu Leu Ala Ser Thr			
85	90	95	
Pro Pro Ser Ser Glu Asp Ser Ala Ser Gly Ser Asp Glu			
100	105		

<210> 2937

<211> 749

<212> DNA

<213> Homo sapiens

<400> 2937

```

nngaattcca gtgaaagtgg gagccttgaa gtcgtagaca gcagcgggga aatcattcac
60
cgagtcaaaa agctgacatg tcgggtaaaa attaaagaag caacggggct gcccttaaac
120
ctctcaaatt ttgtcttctg tcaatacaca ttctgggacc agtgtgagtc tacgggtggct
180
gccccgggtgg tggaccccgga ggtgccttca ccacagtcca aggatgcccc gtacacagtg
240
accttctccc actgtaagga ctatgtggtg aatgtaacag aagaatttct ggagttcatt
300
tcagatggag cactggccat tgaagtatgg ggccaccggt gtgctggaaa tggcagctcc
360
atctgggagg tcgattctct tcatgctaag acaagaacac tgcattgacag gtggaatgaa
420
gtaacgcgaa gaatagaaat gtggatctcc atattagaat tgaatgagtt aggagagtat
480
gctgcagtgg aacttcatca ggcaaaagat gtcaacacag gaggcattct tcaacttaga
540
caggggtcatt cccgtagagt acaagtcacg gtgaaacctg tgcagcattc agggacactg
600
ccacttatgg ttgaagccat cctgtcagta tccatcggtt gtgtaactgc caggtccacc
660
aaactccaaa gagggctgga cagttaccag agagatgatg aggatggtga tgatatggat
720
agttatcagg aagaagactt aaactgcag
749

```

<210> 2938

<211> 249

<212> PRT

<213> Homo sapiens

<400> 2938

Xaa Asn Ser Ser Glu Ser Gly Ser Leu Glu Val Val Asp Ser Ser Gly

1	5	10	15
Glu Ile Ile His Arg Val Lys Lys Leu Thr Cys Arg Val Lys Ile Lys			
20	25	30	
Glu Ala Thr Gly Leu Pro Leu Asn Leu Ser Asn Phe Val Phe Cys Gln			
35	40	45	
Tyr Thr Phe Trp Asp Gln Cys Glu Ser Thr Val Ala Ala Pro Val Val			
50	55	60	
Asp Pro Glu Val Pro Ser Pro Gln Ser Lys Asp Ala Gln Tyr Thr Val			
65	70	75	80
Thr Phe Ser His Cys Lys Asp Tyr Val Val Asn Val Thr Glu Glu Phe			
85	90	95	
Leu Glu Phe Ile Ser Asp Gly Ala Leu Ala Ile Glu Val Trp Gly His			
100	105	110	
Arg Cys Ala Gly Asn Gly Ser Ser Ile Trp Glu Val Asp Ser Leu His			
115	120	125	
Ala Lys Thr Arg Thr Leu His Asp Arg Trp Asn Glu Val Thr Arg Arg			
130	135	140	
Ile Glu Met Trp Ile Ser Ile Leu Glu Leu Asn Glu Leu Gly Glu Tyr			
145	150	155	160
Ala Ala Val Glu Leu His Gln Ala Lys Asp Val Asn Thr Gly Gly Ile			
165	170	175	
Phe Gln Leu Arg Gln Gly His Ser Arg Arg Val Gln Val Thr Val Lys			
180	185	190	
Pro Val Gln His Ser Gly Thr Leu Pro Leu Met Val Glu Ala Ile Leu			
195	200	205	
Ser Val Ser Ile Gly Cys Val Thr Ala Arg Ser Thr Lys Leu Gln Arg			
210	215	220	
Gly Leu Asp Ser Tyr Gln Arg Asp Asp Glu Asp Gly Asp Asp Met Asp			
225	230	235	240
Ser Tyr Gln Glu Glu Asp Leu Asn Cys			
245			

<210> 2939

<211> 2405

<212> DNA

<213> Homo sapiens

<400> 2939

nncgtacgtc tccccactac cggttccac cactgattct gggggcgaag gaaggagcca
60
gagtgcatt gcagatccag accccagagt cagaaggagt gagaaccctg acccctaate
120
ccactgcate cagccaatag gagcccagcc accatggcgg agctgcagga ggtgcagatc
180
acagaggaga agccactgtt gccaggacag acgcctgagg cggccaagac tcactctgtg
240
gagacacat acggctctgt cactttcact gtctatggca ccccaaac caaacgccca
300
gcatcctta cctaccacga tgtgggactc aactataaat cttgcttcca gccactgttt
360
cagttcgagg acatgcagga aatcattcag aactttgtgc gggttcatgt ggatgccctt
420
ggaatggaag agggagcccc tgtgttcctt ttgggatatc agtaccatc tctggaccag
480

cttgacagaca tgatcccttg cgtcctgcag tacctaaatt tctctacaat aattggagtt
540
ggtgttggag ctggagccta catcctggcg agatatgctc ttaaccaccc ggacactgtt
600
gaaggtcttg tcctcatcaa cattgatccc aatgccaaagg gttggatgga ttgggcagcc
660
cacaagctaa caggcctcac ctcttcatt ccggagatga tccttggaca tcttttcagc
720
caggaagagc tctctggaat ttctgagttg atacaaaagt acagaaatat cattacacat
780
gcaccaacc tggataacat tgaattgtac tggaaacagct acaacaaccg ccgagacctg
840
aactttgagc gtggaggtga tatcaccctc aggtgtcctg tgatgctggt ggtaggagac
900
caagcacctc atgaagatgc agtgggtgga tgtaactcaa aactggaccc caccagacc
960
tcgttcctca agatggctga ctccggaggt cagccccagc tgactcagcc aggcaagctg
1020
accgaggcct tcaagtactt cctgcaaggc atgggctaca tggcctcatc ctgcatgact
1080
cgctgtccc ggtctctgac agcctctctg accagtgcag catccgttga tggcaaccgg
1140
tcccgtctc gcaccctgtc ccagagcagc gagtctggaa ctctttcttc ggggcccccg
1200
gggcacacca tggaggtctc ctgttgaatg gcccttggtg ccctagagtg ggaccagcc
1260
ctcacctccc ccagagctaa cctgggaggt gctgaagggg cattgggcca ccgtaagcaa
1320
gggaaaaagg gcagatcatg cggggagatg acctgatct ttgattgcta ccctaactt
1380
gacctttaac ccgtgattcc cccagctcc tggaaagat gtcctaatat ctcttaggga
1440
cccagacccc taaattctcc tcctcccca ttttgggtgtt aagggtggaga gggcatatgc
1500
atcctctgtc ctgatctagg tgtctatagc tgaggggtaa gaggttgttg tagttgtcct
1560
ggtgcctcca tcagactctc cctactgtc ccatatttgc aaggggaggg gatttggggc
1620
tggggctcca ttcaccaaag ctgaggtggc ttctcattaa ccctttagga ctctgaaggg
1680
tatggacctc cgtgaatgtg tgtcagggg agacttgctg gtgggttagt ggtcctcagg
1740
atgtgataga aacatccagt gtaaaaagga agttggaatg ggagttggcg ggcagtgaac
1800
gagtgtgggg aaggattggt gctggggcaa caggaagggg cctggggccg tttggctgca
1860
ctaactttgg tagctcagt tgcactaga gtgggactgg ggaggagct aagcttgggc
1920
tgggctgctt ggggcttggc atagggtgga aagggctacc ctggggctct gaccacactg
1980
tagtatgtgt ggaggggtgc ctcccgtctc ccacaacttc tgcataaca ataaactgta
2040
gaggaatcaa agatcaaggt catctcccc catgatctgc cctttttccc ttgcttacgg
2100

tgaaccaatg tcccttcagc acctcccagg ttagatatgg gggagggtgag ggctgggtcc
 2160
 cactctatgg caacaagggc aattcaacag gagacctcca tggttttcca cgggggcccc
 2220
 gaagaaagat ttccagactc gactgctctg ggaccagggg gtcatgagcg taaaatgggc
 2280
 aagggagagc gggcggaggg ccccgaggtg gcagcagggg tcaggggaagt gggcttccga
 2340
 gtgccctctg ttgaaattgt caccacacag ctgcccgccg tggaaattga ggaaggggtt
 2400
 ttttt
 2405

<210> 2940

<211> 357

<212> PRT

<213> Homo sapiens

<400> 2940

Met	Ala	Glu	Leu	Gln	Glu	Val	Gln	Ile	Thr	Glu	Glu	Lys	Pro	Leu	Leu	1	5	10	15
Pro	Gly	Gln	Thr	Pro	Glu	Ala	Ala	Lys	Thr	His	Ser	Val	Glu	Thr	Pro	20	25	30	
Tyr	Gly	Ser	Val	Thr	Phe	Thr	Val	Tyr	Gly	Thr	Pro	Lys	Pro	Lys	Arg	35	40	45	
Pro	Ala	Ile	Leu	Thr	Tyr	His	Asp	Val	Gly	Leu	Asn	Tyr	Lys	Ser	Cys	50	55	60	
Phe	Gln	Pro	Leu	Phe	Gln	Phe	Glu	Asp	Met	Gln	Glu	Ile	Ile	Gln	Asn	65	70	75	80
Phe	Val	Arg	Val	His	Val	Asp	Ala	Pro	Gly	Met	Glu	Glu	Gly	Ala	Pro	85	90	95	
Val	Phe	Pro	Leu	Gly	Tyr	Gln	Tyr	Pro	Ser	Leu	Asp	Gln	Leu	Ala	Asp	100	105	110	
Met	Ile	Pro	Cys	Val	Leu	Gln	Tyr	Leu	Asn	Phe	Ser	Thr	Ile	Ile	Gly	115	120	125	
Val	Gly	Val	Gly	Ala	Gly	Ala	Tyr	Ile	Leu	Ala	Arg	Tyr	Ala	Leu	Asn	130	135	140	
His	Pro	Asp	Thr	Val	Glu	Gly	Leu	Val	Leu	Ile	Asn	Ile	Asp	Pro	Asn	145	150	155	160
Ala	Lys	Gly	Trp	Met	Asp	Trp	Ala	Ala	His	Lys	Leu	Thr	Gly	Leu	Thr	165	170	175	
Ser	Ser	Ile	Pro	Glu	Met	Ile	Leu	Gly	His	Leu	Phe	Ser	Gln	Glu	Glu	180	185	190	
Leu	Ser	Gly	Asn	Ser	Glu	Leu	Ile	Gln	Lys	Tyr	Arg	Asn	Ile	Ile	Thr	195	200	205	
His	Ala	Pro	Asn	Leu	Asp	Asn	Ile	Glu	Leu	Tyr	Trp	Asn	Ser	Tyr	Asn	210	215	220	
Asn	Arg	Arg	Asp	Leu	Asn	Phe	Glu	Arg	Gly	Gly	Asp	Ile	Thr	Leu	Arg	225	230	235	240
Cys	Pro	Val	Met	Leu	Val	Val	Gly	Asp	Gln	Ala	Pro	His	Glu	Asp	Ala	245	250	255	
Val	Val	Glu	Cys	Asn	Ser	Lys	Leu	Asp	Pro	Thr	Gln	Thr	Ser	Phe	Leu	260	265	270	
Lys	Met	Ala	Asp	Ser	Gly	Gly	Gln	Pro	Gln	Leu	Thr	Gln	Pro	Gly	Lys				

275	280	285
Leu Thr Glu Ala Phe Lys Tyr Phe Leu Gln Gly Met Gly Tyr Met Ala		
290	295	300
Ser Ser Cys Met Thr Arg Leu Ser Arg Ser Arg Thr Ala Ser Leu Thr		
305	310	315
Ser Ala Ala Ser Val Asp Gly Asn Arg Ser Arg Ser Arg Thr Leu Ser		
	325	330
Gln Ser Ser Glu Ser Gly Thr Leu Ser Ser Gly Pro Pro Gly His Thr		
	340	345
Met Glu Val Ser Cys		350
355		

<210> 2941

<211> 847

<212> DNA

<213> Homo sapiens

<400> 2941

```

nacggttgt cgtctctccg ggccctgggc agccaggatc ttctctctggg cggcaatgcg
60
ccctgcatcc tgcagctgga tcttcagcat ctccatgggc gtggtcacga tcacctggca
120
ggtgccagcc ccacagcccg ccagcatctc tttaagcagg gtcagctctc ggcccagggg
180
ggtgcccagc cctcagtgga ggctccagct gcccctcggc ccacggccac ccagctgacc
240
cgcgacctgc tgcggagccg tggcattgcc ggtctctaca agggactcgg ggccacgctg
300
ctcagggatg tccccttctc tgtggtgtac ttcccgtctt ttgccaacct gaaccagctg
360
ggccgcccgg cgtccgagga gaagtcgect ttctacgtgt ccttctctggc cggctgtgtg
420
gctgggagtg ccgccgctgt ggccgtcaac ccctgtgatg tgggtaagac gcggctccag
480
tcaattcagc gaggcgtcaa cgaggacacc tactctggga tcctggactg tgccaggaag
540
atcctgcggc acgagggccc ctcggccttc ctgaaggcg cctactgccg cgcgctggtc
600
atcgcgcccc ttttcggcat cgcacagggt gtctacttcc tgggcatcgc ggagtcctg
660
ctggggctgc tgcaggaccc ccaggcctga gcccagcacc cgctccaccc cagccagctg
720
ggcagggccg gtgtggggct ggagccaggc agctagccca ggacggagca agggaagacc
780
cctccccagc cctcccgtcg gcaggggcag cagggggcag ggtgcagggt ccacataggt
840
ggtgcac
847

```

<210> 2942

<211> 229

<212> PRT

<213> Homo sapiens

<400> 2942

Xaa Ala Leu Ser Ser Leu Arg Ala Leu Gly Ser Gln Asp Leu Pro Leu
 1 5 10 15
 Gly Gly Asn Ala Pro Cys Ile Leu Gln Leu Asp Leu Gln His Leu His
 20 25 30
 Gly Arg Gly His Asp His Leu Ala Gly Ala Ser Pro Thr Ala Arg Gln
 35 40 45
 His Leu Phe Lys Gln Gly Gln Leu Ser Ala Gln Gly Gly Ala Gln Pro
 50 55 60
 Ser Val Glu Ala Pro Ala Ala Pro Arg Pro Thr Ala Thr Gln Leu Thr
 65 70 75 80
 Arg Asp Leu Leu Arg Ser Arg Gly Ile Ala Gly Leu Tyr Lys Gly Leu
 85 90 95
 Gly Ala Thr Leu Leu Arg Asp Val Pro Phe Ser Val Val Tyr Phe Pro
 100 105 110
 Leu Phe Ala Asn Leu Asn Gln Leu Gly Arg Pro Ala Ser Glu Glu Lys
 115 120 125
 Ser Pro Phe Tyr Val Ser Phe Leu Ala Gly Cys Val Ala Gly Ser Ala
 130 135 140
 Ala Ala Val Ala Val Asn Pro Cys Asp Val Val Lys Thr Arg Leu Gln
 145 150 155 160
 Ser Leu Gln Arg Gly Val Asn Glu Asp Thr Tyr Ser Gly Ile Leu Asp
 165 170 175
 Cys Ala Arg Lys Ile Leu Arg His Glu Gly Pro Ser Ala Phe Leu Lys
 180 185 190
 Gly Ala Tyr Cys Arg Ala Leu Val Ile Ala Pro Leu Phe Gly Ile Ala
 195 200 205
 Gln Val Val Tyr Phe Leu Gly Ile Ala Glu Ser Leu Leu Gly Leu Leu
 210 215 220
 Gln Asp Pro Gln Ala
 225

<210> 2943

<211> 1501

<212> DNA

<213> Homo sapiens

<400> 2943

tccggatttt cagccgggtc ttccggggat ggagagcaaa aggacttggt gctctcggag
 60
 agagcctgca ggggccggaa gtcgaggcgg gactgactct gcttccgttt ctggttttgc
 120
 tctagtgttt gggtttcttc gcggctgctc aagatgaacc gactcttcgg gaaagcgaaa
 180
 cccaaggctc cgccgccag cctgactgac tgcattggca cgggtggacag tagagcagaa
 240
 tccattgaca agaagatttc tcgattggat gctgagctag tgaagtataa ggatcagatc
 300
 aagaagatga gagaggggtc tgcaaagaat atggtcaagc agaaagcctt gcgagtttta
 360
 aagcaaaaaga ggatgtatga gcagcagcgg gacaatcttg ccaacagtca ttcaacatgg
 420
 aacgcccaatt ataccatcca gtctttgaag gacaccaaga ccacgggtga tgctatgaaa
 480

ctgggagtaa aggaaatgaa gaaggcatat aagcaagtga agatcgacca gattgaggat
 540
 ttacaagacc agctagagga tatgatggaa gatgcaaatag aaatccaaga agcactgagat
 600
 cgcagttatg gcaccccgaga actggatgaa gatgatttag aagcagagtt ggatgcacta
 660
 ggtgatgagc ttctggctga tgaagacagt tcttatttgg atgaggcagc atctgcacct
 720
 gcaattccag aagggtgttcc cactgatata aaaaacaagg atggagttct ggtggatgaa
 780
 tttggattgc cacagatccc tgcttcatag atttgcata ttcaagcata tcttgtaaaa
 840
 caaacacata ttatgggact aggaaatatt tatctttcca aatttgccat aacagattta
 900
 ggtttcttct ctttctttga aggaaagttt aattacattg ctcttttatt ttttccatta
 960
 agagactcat tgcttgggaa atgctttctt cgtactaaaa tttgattcct ttttttctta
 1020
 tgaaaaacga actcagttta aaagtatttt tagctcgtat gacttgtttt cattcattaa
 1080
 taataatttg aaataaaaact aaggaaatgg aatcttaaaa gtctatgaca gtgtaactct
 1140
 acagtctcaa aatgacctga taaattgata agacaaagat gagattattg gggctgttca
 1200
 tattatgatt cagaatcatt ttctattgtg gtattatagg ttggttaaag tgatggcctt
 1260
 tttgatgggt tttgttgtgt cttgtgaaca agtcgttact gtgtccatta ttggaatgga
 1320
 attatcacta ctgtatcatg agtgggtatt ttgattctat ggttccctca gtattacatc
 1380
 ttgacttgta atcaattatg aatatttctt gatatttaat gtataggaca tttatttata
 1440
 ctcaataaat atttttcaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 1500
 a
 1501

<210> 2944

<211> 218

<212> PRT

<213> Homo sapiens

<400> 2944

Met	Asn	Arg	Leu	Phe	Gly	Lys	Ala	Lys	Pro	Lys	Ala	Pro	Pro	Pro	Ser
1				5					10					15	
Leu	Thr	Asp	Cys	Ile	Gly	Thr	Val	Asp	Ser	Arg	Ala	Glu	Ser	Ile	Asp
		20						25					30		
Lys	Lys	Ile	Ser	Arg	Leu	Asp	Ala	Glu	Leu	Val	Lys	Tyr	Lys	Asp	Gln
		35					40					45			
Ile	Lys	Lys	Met	Arg	Glu	Gly	Pro	Ala	Lys	Asn	Met	Val	Lys	Gln	Lys
		50				55					60				
Ala	Leu	Arg	Val	Leu	Lys	Gln	Lys	Arg	Met	Tyr	Glu	Gln	Gln	Arg	Asp
65				70						75				80	
Asn	Leu	Ala	Asn	Ser	His	Ser	Thr	Trp	Asn	Ala	Asn	Tyr	Thr	Ile	Gln

```
<210> 2945
<211> 3331
<212> DNA
<213> Homo sapiens
```

```
<400> 2945
nnngcggcggt tagctcccag ttcggcctct gaggaaaacg ggcgttcgcc tgcggttggt
60
ccgactgtta gcaacatgag cggcctggat ggggtcaaga ggaccactcc cctccaaacc
120
cacagcatca ttattttctga ccaagtcccc agcgcaccagg acgcacacca gtacctgagg
180
ctccgcgacc aaagcgaggc gacacaggtg atggcggagc cgggtgaggg aggctcggag
240
accgtcgcgc tcccgcctcc accgccttca gaggaggggg gcgtacccca ggatgccgcg
300
ggccgtggcg gtactcccca gatccgagtt gttgggggtc gcggtcatgt ggcgatcaaa
360
gccgggcagg aagagggcca gcctcccgcg gaaggcctgg cagccgcttc tgtggtgatg
420
gcagccgacc gcagcctgaa aaagggcggt caggggtggag agaaggccct agaaatctgt
480
ggcgcgccaga gatccgcgtc tgagctgacg gcggggggcg aggctgaggc ggaggaggtg
540
aagacaggaa agtgcgccac cgtctcagca gccgtggctg agagggagag cgctgaggtg
600
gtggtgaagg aaggcctggc ggagaaggag gtaatggagg agcagatgga ggtagaggag
660
cagccgccag aaggtgaaga aatagaagtg gcggaggagg atagattgga ggaggaggcg
720
agggaggaag aagggccctg gcctttgcat gaggctctcc gcatggaccc tctggaggcc
780
atccagctgg aactggacac tgtgaatgct caggccgaca gggccttcca acagctggag
840
cacaagtttg ggcggatgcg tcgacactac ctggagcgga ggaactacat cattcagaat
900
```

atccccgggct tctggatgac tgcttttcga aaccaccccc agttgtccgc catgattagg
960
ggccaagatg cagagatggt aaggtacata accaatttag aggtgaagga actcagacac
1020
cctagaaccg gttgcaagtt caagttcttc tttagaagaa acccctactt cagaaacaag
1080
ctgattgtca aggaatatga ggtaagatcc tccggccgag tgggtgtctct ttctactcca
1140
attatatggc gcagggggca tgaaccccag tccttcattc gcagaaacca agacctcatc
1200
tgcagcttct tcacttggtt ttcagaccac agccttccag agtccgacaa aattgctgag
1260
attattaaag aggatctgtg gccaaatcca ctgcaatact acctgttgcg tgaaggagtc
1320
cgtagagccc gacgtcgccc gctaaggag cctgtagaga tccccaggcc ctttgggttc
1380
cagtctgggt aacatttgcc cttgggaata ctctgcaca aggtctccta ccaccttctg
1440
ctggacctgt gcttgggcat cagcaatgag tatgccttct attgtgcttt gtttttgctg
1500
acttttctgc accctgtttc ctttggatat tcagttctct caacctcaag attgagacgg
1560
tgggtgggtat gcttctccac ttccatatga ccttcatgct gttctggaat atcacatgct
1620
acgaggatcat ccttcacact acttgtaagc caagcaaag atactgtaga ttgtactgcc
1680
tttatctgca ctgcttgga cctgtttatt cccagggcct ctgaactggg tgctgtcact
1740
tggatttcta gctttgggag cctgttccac ctactcagct ctgcattgag cagtatgggc
1800
acatgccctg tggacagtta ctggacgtta atgaactcag aggagaaaag cagtgaacca
1860
cttgttctgt gtgatttatg gtacttcatt gctcttcctt cacctctagt cactttctat
1920
tgtaacctgc cctacattgg ctctgccaa ggtccctctc tctccctggt ttctttttt
1980
tttttttttt tttttttttt gagacggagg acggagtctt gctctgtcgc ccagggttga
2040
gtgcagtggc gcgatctcgg ctactgcaa cctccacctc ccgggttcaa gcgattctcc
2100
tgccctcagc tcccagatg ctgggactac aggcgcgcgc cgccacgccc ggctaatttt
2160
tatattttta gtagagacgg ggtttcacca tgctggccag gctgggtctc aaccccgatc
2220
tcgtgatccg cctccttag cctcccaatc ctctcttaaa aaagtgatag ctcagaaaca
2280
tttgtaaaag caagggtttt atttcatttt ggctctgtca ttttcagagg caaagaagtt
2340
ggcctgtaaa atagagtgtc agagctctta cgccctctcc cttcttccca acttctact
2400
tcctagccct tttatcaact cctagaatag ttaaagagag acacatctag atgggatgaa
2460
aggtgcccta agcaggagaa actgaacaaa aggctagagg catggggccag gtaaaaattg
2520

ggcctagagt gaagactgtg ctgtcgtaa gagctttcga ggaaggagta cttactcccc
 2580
 aatgatgatg aatggaaaaa tacttttcag ggagaattga aggggttaaa gtgttaaata
 2640
 tgttgcctag acaagggttc tttaaagaaa gacagcgcaa ctttgaatgc tttcttactt
 2700
 gttttgtgac ctaatttatg tggaagattg ttatttcatt aggatttagt aaaatttttt
 2760
 tttctgattc taaacttatt gtgaaaattg agctgtacag atattctttt gatttcaatt
 2820
 gggaacattt ggaagaacaa cagtcttact tgctgtaca atatagagac atatgaatag
 2880
 tcataacagt tttcaacttg ttcttgtttc tgttaaacta tattcctaga aacatagttt
 2940
 gaacaacttg gtctttgtta ggcttgtcaa attgccttca tggaaaaata atctacaaaa
 3000
 gtatggttta attgattgtc ttacatgata attttccttg gtaacaactt agtaagtgat
 3060
 atatcttttt tcctaaattg cttaaatact gtgaaattgc tctgacaaat tggaagtgtg
 3120
 ccattggcat atttgtcttc ctttttatgc atgatggtaa aataaaagca tgttgttctg
 3180
 ctagatttct tattttttcac cttaccata aatgtaatgc ttgaatgaag ttgttcatat
 3240
 taattaaataa ttatggaatc attaaagtcc ttaatccat taaagttctt aatggattaa
 3300
 aatcattaa gttcttaatg gattaaatc a
 3331

<210> 2946

<211> 463

<212> PRT

<213> Homo sapiens

<400> 2946

Xaa	Arg	Arg	Leu	Ala	Pro	Ser	Ser	Ala	Ser	Glu	Glu	Asn	Gly	Arg	Ser
1				5					10					15	
Pro	Ala	Val	Gly	Pro	Thr	Val	Ser	Asn	Met	Ser	Gly	Leu	Asp	Gly	Val
		20						25					30		
Lys	Arg	Thr	Thr	Pro	Leu	Gln	Thr	His	Ser	Ile	Ile	Ile	Ser	Asp	Gln
		35					40					45			
Val	Pro	Ser	Asp	Gln	Asp	Ala	His	Gln	Tyr	Leu	Arg	Leu	Arg	Asp	Gln
		50				55					60				
Ser	Glu	Ala	Thr	Gln	Val	Met	Ala	Glu	Pro	Gly	Glu	Gly	Gly	Ser	Glu
65				70						75				80	
Thr	Val	Ala	Leu	Pro	Pro	Pro	Pro	Pro	Ser	Glu	Glu	Gly	Gly	Val	Pro
				85					90					95	
Gln	Asp	Ala	Ala	Gly	Arg	Gly	Gly	Thr	Pro	Gln	Ile	Arg	Val	Val	Gly
		100						105					110		
Gly	Arg	Gly	His	Val	Ala	Ile	Lys	Ala	Gly	Gln	Glu	Glu	Gly	Gln	Pro
		115					120					125			
Pro	Ala	Glu	Gly	Leu	Ala	Ala	Ala	Ser	Val	Val	Met	Ala	Ala	Asp	Arg
		130				135					140				
Ser	Leu	Lys	Lys	Gly	Val	Gln	Gly	Gly	Glu	Lys	Ala	Leu	Glu	Ile	Cys

```

145          150          155          160
Gly Ala Gln Arg Ser Ala Ser Glu Leu Thr Ala Gly Ala Glu Ala Glu
          165          170          175
Ala Glu Glu Val Lys Thr Gly Lys Cys Ala Thr Val Ser Ala Ala Val
          180          185          190
Ala Glu Arg Glu Ser Ala Glu Val Val Val Lys Glu Gly Leu Ala Glu
          195          200          205
Lys Glu Val Met Glu Glu Gln Met Glu Val Glu Glu Gln Pro Pro Glu
          210          215          220
Gly Glu Glu Ile Glu Val Ala Glu Glu Asp Arg Leu Glu Glu Glu Ala
225          230          235          240
Arg Glu Glu Glu Gly Pro Trp Pro Leu His Glu Ala Leu Arg Met Asp
          245          250          255
Pro Leu Glu Ala Ile Gln Leu Glu Leu Asp Thr Val Asn Ala Gln Ala
          260          265          270
Asp Arg Ala Phe Gln Gln Leu Glu His Lys Phe Gly Arg Met Arg Arg
          275          280          285
His Tyr Leu Glu Arg Arg Asn Tyr Ile Ile Gln Asn Ile Pro Gly Phe
          290          295          300
Trp Met Thr Ala Phe Arg Asn His Pro Gln Leu Ser Ala Met Ile Arg
305          310          315          320
Gly Gln Asp Ala Glu Met Leu Arg Tyr Ile Thr Asn Leu Glu Val Lys
          325          330          335
Glu Leu Arg His Pro Arg Thr Gly Cys Lys Phe Lys Phe Phe Phe Arg
          340          345          350
Arg Asn Pro Tyr Phe Arg Asn Lys Leu Ile Val Lys Glu Tyr Glu Val
          355          360          365
Arg Ser Ser Gly Arg Val Val Ser Leu Ser Thr Pro Ile Ile Trp Arg
          370          375          380
Arg Gly His Glu Pro Gln Ser Phe Ile Arg Arg Asn Gln Asp Leu Ile
385          390          395          400
Cys Ser Phe Phe Thr Trp Phe Ser Asp His Ser Leu Pro Glu Ser Asp
          405          410          415
Lys Ile Ala Glu Ile Ile Lys Glu Asp Leu Trp Pro Asn Pro Leu Gln
          420          425          430
Tyr Tyr Leu Leu Arg Glu Gly Val Arg Arg Ala Arg Arg Arg Pro Leu
          435          440          445
Arg Glu Pro Val Glu Ile Pro Arg Pro Phe Gly Phe Gln Ser Gly
          450          455          460

```

<210> 2947

<211> 997

<212> DNA

<213> Homo sapiens

<400> 2947

```

naccgctccg ccgccgtgcc cgctgccatg aaccgcttca ggggtgtccaa gttccggcac
60
accgaggctc ggccgccccg ccgcgagtc tggatcagtg acattcgagc aggaaccgcc
120
ccttcatgca ggaaccacat caaatcaagc tgcagcttga tcgccttcaa ctccgaccgt
180
cctggtgtac tgggcattgt gcctctgcaa ggccaaggag aggacaagcg acgcgtggcc
240

```

cacctgggct gccattcaga cctagtcacc gacttggact tctcgccctt tgatgacttc
 300
 ctcttgccca caggctcggc tgacaggacg gtaaaactct ggcgactgcc agggcctggc
 360
 caggccctgc cctcagcacc cgggggtggtg ctgggccccg aggacctccc agtggaggta
 420
 ctgcagttcc accccacctc tgacggcatt ctggtgagcg cagcaggcac cactgtgaag
 480
 gtctgggacg cagccaagca gcagcccctg acagagctgg cagcccatgg ggacctggtg
 540
 cagagcgccg tctggagccg agatggagcc ctggtgggca cggcgtgcaa ggacaagcag
 600
 ctgcagatct ttgaccccag aacaaagccg cgggcctctc agagcacgca ggcccatgag
 660
 aacagcaggg atagccggct ggcatggatg ggcacctggg agcaccttgt gtctactgga
 720
 ttcaaccaga tgcgtgagcg cgaagtgaag ctgtgggaca cgcggttctt ctccagcgcc
 780
 ctggcctccc tcaccttgga cacctcgctt ggggtgtctg tgctctgct ggacctgac
 840
 tctgggctcc tggtcctggc aggaaagggc gagaggcagc tgtactgtta cgaggtggtc
 900
 ccgcagcagc cggcgtgag ccagtgacc cagtgtgtcc tggagagcgt gctgcgtggg
 960
 gctgcccttg tgccccggca ggcgctggcc gtcatga
 997

<210> 2948

<211> 332

<212> PRT

<213> Homo sapiens

<400> 2948

Xaa	Ala	Ser	Ala	Ala	Val	Pro	Val	Ala	Met	Asn	Arg	Phe	Arg	Val	Ser
1				5					10					15	
Lys	Phe	Arg	His	Thr	Glu	Ala	Arg	Pro	Pro	Arg	Arg	Glu	Ser	Trp	Ile
			20					25					30		
Ser	Asp	Ile	Arg	Ala	Gly	Thr	Ala	Pro	Ser	Cys	Arg	Asn	His	Ile	Lys
		35				40						45			
Ser	Ser	Cys	Ser	Leu	Ile	Ala	Phe	Asn	Ser	Asp	Arg	Pro	Gly	Val	Leu
	50				55						60				
Gly	Ile	Val	Pro	Leu	Gln	Gly	Gln	Gly	Glu	Asp	Lys	Arg	Arg	Val	Ala
65				70					75					80	
His	Leu	Gly	Cys	His	Ser	Asp	Leu	Val	Thr	Asp	Leu	Asp	Phe	Ser	Pro
			85					90						95	
Phe	Asp	Asp	Phe	Leu	Leu	Ala	Thr	Gly	Ser	Ala	Asp	Arg	Thr	Val	Lys
			100					105					110		
Leu	Trp	Arg	Leu	Pro	Gly	Pro	Gly	Gln	Ala	Leu	Pro	Ser	Ala	Pro	Gly
		115				120						125			
Val	Val	Leu	Gly	Pro	Glu	Asp	Leu	Pro	Val	Glu	Val	Leu	Gln	Phe	His
		130				135					140				
Pro	Thr	Ser	Asp	Gly	Ile	Leu	Val	Ser	Ala	Ala	Gly	Thr	Thr	Val	Lys
145					150				155					160	
Val	Trp	Asp	Ala	Ala	Lys	Gln	Gln	Pro	Leu	Thr	Glu	Leu	Ala	Ala	His


```

<400> 2949
actagtatca ctcctcccag tggagccttt tctggggatt tagctgaatc cttgtgagta
60
acattctgaa tcacttgctt gatgattggt attgggatta gtttccttgg gacatatgct
120
ggcactgtgt ggtcttggtc ataggctactt tggattttcc catttacttt ttactttcca
180
acaacagtct tgtgattgaa aatcttactc caaattccac cttccacatt gtcttttact
240
ccaaattcat aaactgtggt gggctttagg ttttccacaa ttgtttcagg ggctggacag
300
atttgaaaaa tccacttctt ttcttttatcc ttttctcgat agcgaattgt ataaaaatctg
360
tcattggggac agtgacttgg caatgtccag tcatgggtgtg ggttgatgag gaaaccccag
420
gacaggaaga ctgagctcgg tgtcagagtg ccaaccacca gctgcagagg tttgcgagaa
480
cgagttttac ctgaacatga cttcttttga cttggagggtg gagcagggtcg cacaactatc
540
agatattttcg gctctgcata aactatagct tctgtgaatt tcccttcagc gggaagaggg
600
aagtactggt ttggtgatac attgctgcc aatcccagga gaagaccttc aagctttaca
660
tttggacttg gacgcaagaa cttcaagagg atggagtcac ttgtggtatt gatgtggact
720
ttgaggtttg gccttttacc ttttggcaat ttctgtgcat tcccagggc tagtgtaata
780

```

cttccacaga gaagtagaca ccccaaactg gagagcatgt tgcatttgcc acctcgcatg
840

gggaatgatg ctggtgggtg cctcgcaacc ctggagctga
880

<210> 2950

<211> 279

<212> PRT

<213> Homo sapiens

<400> 2950

Met	Arg	Gly	Gly	Lys	Cys	Asn	Met	Leu	Ser	Ser	Leu	Gly	Cys	Leu	Leu
1				5					10					15	
Leu	Cys	Gly	Ser	Ile	Thr	Leu	Ala	Leu	Gly	Asn	Ala	Gln	Lys	Leu	Pro
			20					25					30		
Lys	Gly	Lys	Arg	Pro	Asn	Leu	Lys	Val	His	Ile	Asn	Thr	Thr	Ser	Asp
		35					40					45			
Ser	Ile	Leu	Leu	Lys	Phe	Leu	Arg	Pro	Ser	Pro	Asn	Val	Lys	Leu	Glu
	50					55					60				
Gly	Leu	Leu	Leu	Gly	Tyr	Gly	Ser	Asn	Val	Ser	Pro	Asn	Gln	Tyr	Phe
65					70					75				80	
Pro	Leu	Pro	Ala	Glu	Gly	Lys	Phe	Thr	Glu	Ala	Ile	Val	Asp	Ala	Glu
				85					90					95	
Pro	Lys	Tyr	Leu	Ile	Val	Val	Arg	Pro	Ala	Pro	Pro	Pro	Ser	Gln	Lys
			100					105					110		
Lys	Ser	Cys	Ser	Gly	Lys	Thr	Arg	Ser	Arg	Lys	Pro	Leu	Gln	Leu	Val
		115					120					125			
Val	Gly	Thr	Leu	Thr	Pro	Ser	Ser	Val	Phe	Leu	Ser	Trp	Gly	Phe	Leu
	130						135				140				
Ile	Asn	Pro	His	His	Asp	Trp	Thr	Leu	Pro	Ser	His	Cys	Pro	Asn	Asp
145					150					155				160	
Arg	Phe	Tyr	Thr	Ile	Arg	Tyr	Arg	Glu	Lys	Asp	Lys	Glu	Lys	Lys	Trp
				165					170					175	
Ile	Phe	Gln	Ile	Cys	Pro	Ala	Pro	Glu	Thr	Ile	Val	Glu	Asn	Leu	Lys
			180					185					190		
Pro	Asn	Thr	Val	Tyr	Glu	Phe	Gly	Val	Lys	Asp	Asn	Val	Glu	Gly	Gly
		195					200					205			
Ile	Trp	Ser	Lys	Ile	Phe	Asn	His	Lys	Thr	Val	Val	Gly	Ser	Lys	Lys
	210					215					220				
Val	Asn	Gly	Lys	Ile	Gln	Ser	Thr	Tyr	Asp	Gln	Asp	His	Thr	Val	Pro
225					230					235				240	
Ala	Tyr	Val	Pro	Arg	Lys	Leu	Ile	Pro	Ile	Thr	Ile	Ile	Lys	Gln	Val
				245					250					255	
Ile	Gln	Asn	Val	Thr	His	Lys	Asp	Ser	Ala	Lys	Ser	Pro	Glu	Lys	Ala
		260						265					270		
Pro	Leu	Gly	Gly	Val	Ile	Leu									
		275													

<210> 2951

<211> 3478

<212> DNA

<213> Homo sapiens

<400> 2951

aaatgagget gctgcgacg gcctgaggat ggaccccaag ccctggacct gccgagcgtg
60
gcactgagge agcggctgac gctactgtga gggaaagaag gttgtgagca gccccgcagg
120
ccccctggcc agccctggcc ccagcctctg ccggagccct ctgtggaggc agagcagtgc
180
gagcccatg aggcagggct gcttggcagc caccggcctg caactcagga acccctccag
240
aggccatgga caggctgccc cgctgacggc caggggtaag catgtgagga gccgccccgg
300
agccaagcag gaggggaagag gctttcatag attctattca caaagaataa ccaccatttt
360
gcaaggacca tgaggccact gtgcgtgaca tgctgggtggc tcggactgct ggctgccatg
420
ggagctgttg caggccagga ggacggtttt gagggcactg aggagggctc gccaagagag
480
ttcatttacc taaacaggta caagcgggcg ggcgagtccc aggacaagtg cacctacacc
540
ttcattgtgc ccagcagcg ggtcacgggt gccatctgcg tcaactccaa ggagcctgag
600
gtgcttctgg agaaccgagt gcataagcag gagctagagc tgctcaacaa tgagctgctc
660
aagcagaagc ggcagatcga gacgctgcag cagctgggtgg aggtggacgg cggcattgtg
720
agcgaggtga agctgctgcg caaggagagc cgcaacatga actcgcggggt cacgcagctc
780
tacatgcagc tcctgcacga gatcatccgc aagcgggaca acgcgttggg gctctcccag
840
ctggagaaca ggatcctgaa ccagacagct gacatgctgc agctggccag caagtacaag
900
gacctggagc acaagttcca gcacctggct atgctggccc acaaccaatc agagatcatc
960
gcgcagcttg aggagcactg ccagaggggtg ccctcggcc a ggcctgccc ccagccaccc
1020
ccagcagctc cacctcgggt ctaccaacca cccacctaca accgcatcat caaccagatc
1080
tctaccaacg agatccagag tgaccagaac ctgaaggtgc tgccaccccc tctgcccact
1140
atgcccactc tcaccagcct cccatcttcc accgacaagc cgtcggggccc atggagagac
1200
tgcttgcagg ccctggagga tggccacgac accagctcca tctacctggg gaagccggag
1260
aacaccaacc gcctcatgca ggtgtggtgc gaccagagac acgacccccg gggctggacc
1320
gtcatccaga gacgcctgga tggctctgtt aacttcttca ggaactggga gacgtacaag
1380
caagggtttg ggaacattga tggcgaatac tggctgggccc tggagaacat ttactggctg
1440
acgaaccaag gcaactacaa actcctggtg accatggagg actggtccgg ccgcaaagtc
1500
tttgagaat acgccagttt ccgcctggaa cctgagagcg agtattataa gctgcggtg
1560
gggcgctacc atggcaatgc gggtgactcc ttacatggc acaacggcaa gcagttcacc
1620

accctggaca gagatcatga tgtctacaca ggaaactgtg cccactacca gaagggaggc
1680
tggtggtata acgcctgtgc cactccaac ctcaacgggg tctggtaccg cgggggccat
1740
taccggagcc gctaccagga cggagtctac tgggctgagt tccgaggagg ctcttactca
1800
ctcaagaaag tggatgatgat gatccgaccg aacccaaca ccttccacta agccagctcc
1860
ccctcctgac ctctcgtggc cattgccagg agcccaccct ggtcacgctg gccacagcac
1920
aaagaacaac tctcaccag ttcatcctga ggctgggagg accgggatgc tggattctgt
1980
tttccgaagt cactgcagcg gatgatggaa ctgaatcgat acggtgtttt ctgtccctcc
2040
tactttcctt cacaccagac agcccctcat gtctccagga caggacagga ctacagacaa
2100
ctctttcttt aaataaatta agtctctaca ataaaaacac aactgcaaag taccttcata
2160
atatacatgt gtatgagcct cccttgtgca cgtatgtgta taccacatat atatgcattt
2220
agatatacat cacatgtgat atatctagat ccatatatag gtttgccctta gatacctaaa
2280
tacacatata ttcagttctc agatgttgaa gctgtcacca gcagctttgc tcttaggaga
2340
aaagcatttc attagtgttg tattacttga gtctaagggt agatcacaga ctgtgtggtc
2400
tcaactgaaa ggatcaccct tggcatctgt gtgcctggat tcttccagaa tgtctacaat
2460
gctaattctt cacatagagg ttcccagctt ctaagaacc ctttttggca cctaataaaa
2520
tttcaaaatc cctcccccca cattttcata cttttcccca ttctcaggac ttttcaccat
2580
ccatcaccca cttatccctt catttgacac cattcattaa gtgccttctg tgtgtcagtc
2640
cctggccact cactgcagtt caaggccccc tttccgctct gctgtactcc tcgcctacct
2700
actccttgcc ttttctgtcg cacagccctt tctttccagg cgagattcct cagcttctga
2760
gtaggaaaca ctccgggctc caggtttctg gttgggaagg gaaggccagg ccaaagctc
2820
caccggcctg atagataatg tactcgcagt tttgtatctt ccattcatac tttaacctac
2880
aggtcatttg agtcttcaca caaataataa cctatctggc caggagaatt atctcagaac
2940
agaagtcac agatcatcag agccccaga tggctacaga ccagagattc cacgctctca
3000
ggctgactag agtccgcac tcatctccaa actacacttc cctggagaac aagtgccaca
3060
aaaatgaaaa caggccactt ctcaggagtt gaataatcag gggtcaccgg accccttggt
3120
tgatgcactg cagcatgggt gctttctgag tctgttggtg caccaagtgt cagcctcagc
3180
actcccggga ctattgcaa gaaggggcaa gggatgagtc aagaaggtga gacccttccc
3240

ggtgggcacg tgggccaggc tgtgtgagat gttggatgtt tggtagctgc catgtctggg
 3300
 tgtgtgccta ttacctcagc atttctcaca aagtgtacca tgtagcatgt tttgtgtata
 3360
 taaaagggag ggtttttttta aaaatatatt cccagattat ccttgtaatg acacgaatct
 3420
 gcaataaaaag ccatcagtgc tatttgatg tatctacaaa aaaaaaaaaa aaaaaaaa
 3478

<210> 2952

<211> 493

<212> PRT

<213> Homo sapiens

<400> 2952

Met	Arg	Pro	Leu	Cys	Val	Thr	Cys	Trp	Trp	Leu	Gly	Leu	Leu	Ala	Ala	1	5	10	15
Met	Gly	Ala	Val	Ala	Gly	Gln	Glu	Asp	Gly	Phe	Glu	Gly	Thr	Glu	Glu	20	25	30	
Gly	Ser	Pro	Arg	Glu	Phe	Ile	Tyr	Leu	Asn	Arg	Tyr	Lys	Arg	Ala	Gly	35	40	45	
Glu	Ser	Gln	Asp	Lys	Cys	Thr	Tyr	Thr	Phe	Ile	Val	Pro	Gln	Gln	Arg	50	55	60	
Val	Thr	Gly	Ala	Ile	Cys	Val	Asn	Ser	Lys	Glu	Pro	Glu	Val	Leu	Leu	65	70	75	80
Glu	Asn	Arg	Val	His	Lys	Gln	Glu	Leu	Glu	Leu	Leu	Asn	Asn	Glu	Leu	85	90	95	
Leu	Lys	Gln	Lys	Arg	Gln	Ile	Glu	Thr	Leu	Gln	Gln	Leu	Val	Glu	Val	100	105	110	
Asp	Gly	Gly	Ile	Val	Ser	Glu	Val	Lys	Leu	Leu	Arg	Lys	Glu	Ser	Arg	115	120	125	
Asn	Met	Asn	Ser	Arg	Val	Thr	Gln	Leu	Tyr	Met	Gln	Leu	Leu	His	Glu	130	135	140	
Ile	Ile	Arg	Lys	Arg	Asp	Asn	Ala	Leu	Glu	Leu	Ser	Gln	Leu	Glu	Asn	145	150	155	160
Arg	Ile	Leu	Asn	Gln	Thr	Ala	Asp	Met	Leu	Gln	Leu	Ala	Ser	Lys	Tyr	165	170	175	
Lys	Asp	Leu	Glu	His	Lys	Phe	Gln	His	Leu	Ala	Met	Leu	Ala	His	Asn	180	185	190	
Gln	Ser	Glu	Ile	Ile	Ala	Gln	Leu	Glu	Glu	His	Cys	Gln	Arg	Val	Pro	195	200	205	
Ser	Ala	Arg	Pro	Val	Pro	Gln	Pro	Pro	Pro	Ala	Ala	Pro	Pro	Arg	Val	210	215	220	
Tyr	Gln	Pro	Pro	Thr	Tyr	Asn	Arg	Ile	Ile	Asn	Gln	Ile	Ser	Thr	Asn	225	230	235	240
Glu	Ile	Gln	Ser	Asp	Gln	Asn	Leu	Lys	Val	Leu	Pro	Pro	Pro	Leu	Pro	245	250	255	
Thr	Met	Pro	Thr	Leu	Thr	Ser	Leu	Pro	Ser	Ser	Thr	Asp	Lys	Pro	Ser	260	265	270	
Gly	Pro	Trp	Arg	Asp	Cys	Leu	Gln	Ala	Leu	Glu	Asp	Gly	His	Asp	Thr	275	280	285	
Ser	Ser	Ile	Tyr	Leu	Val	Lys	Pro	Glu	Asn	Thr	Asn	Arg	Leu	Met	Gln	290	295	300	
Val	Trp	Cys	Asp	Gln	Arg	His	Asp	Pro	Gly	Gly	Trp	Thr	Val	Ile	Gln				

305		310		315		320									
Arg	Arg	Leu	Asp	Gly	Ser	Val	Asn	Phe	Phe	Arg	Asn	Trp	Glu	Thr	Tyr
		325							330					335	
Lys	Gln	Gly	Phe	Gly	Asn	Ile	Asp	Gly	Glu	Tyr	Trp	Leu	Gly	Leu	Glu
		340						345					350		
Asn	Ile	Tyr	Trp	Leu	Thr	Asn	Gln	Gly	Asn	Tyr	Lys	Leu	Leu	Val	Thr
		355					360					365			
Met	Glu	Asp	Trp	Ser	Gly	Arg	Lys	Val	Phe	Ala	Glu	Tyr	Ala	Ser	Phe
		370				375					380				
Arg	Leu	Glu	Pro	Glu	Ser	Glu	Tyr	Tyr	Lys	Leu	Arg	Leu	Gly	Arg	Tyr
		385				390				395					400
His	Gly	Asn	Ala	Gly	Asp	Ser	Phe	Thr	Trp	His	Asn	Gly	Lys	Gln	Phe
			405						410					415	
Thr	Thr	Leu	Asp	Arg	Asp	His	Asp	Val	Tyr	Thr	Gly	Asn	Cys	Ala	His
			420					425					430		
Tyr	Gln	Lys	Gly	Gly	Trp	Trp	Tyr	Asn	Ala	Cys	Ala	His	Ser	Asn	Leu
		435					440					445			
Asn	Gly	Val	Trp	Tyr	Arg	Gly	Gly	His	Tyr	Arg	Ser	Arg	Tyr	Gln	Asp
		450				455				460					
Gly	Val	Tyr	Trp	Ala	Glu	Phe	Arg	Gly	Gly	Ser	Tyr	Ser	Leu	Lys	Lys
		465				470				475					480
Val	Val	Met	Met	Ile	Arg	Pro	Asn	Pro	Asn	Thr	Phe	His			
				485					490						

<210> 2953

<211> 1377

<212> DNA

<213> Homo sapiens

<400> 2953

```

nnggctcagg ctgcgggaaa gcgggtgcgcg tgcagcgggg tgggtgccct ggtccgcggg
60
cgagctcgag cagccaaccc cgggcgcgctc ggggccatgg acggcctgag gcagcgcgtg
120
gagcacttcc tggagcaaag gaacctgggtc accgaagtgc tgggggcgct ggaggccaag
180
accgggggtgg agaagcggta tctggctgca ggagccgtca ctctgctaag cctgtatctg
240
ctgttcggct acggagcgtc tctgctgtgc aatctcatcg gatttgtgta cccgcataat
300
gcctcaatca aagctatcga gagcccaagc aaggacgacg acactgtgtg gctcacctac
360
tgggtgggtgt acgccctgtt tgggctggcc gagttcttca gcatctact cctgtcctgg
420
ttccctttct actacgtggg caagtgcgcc ttctgttgtt tctgcatggc tcccaggccc
480
tggaacgggg ctctcatgct gtatcagcgc gtcgtgcgtc cgctgttctt aaggcaccac
540
ggggccgtag acagaatcat gaacgacctc agcgggagag ccctggacgc ggcggccgga
600
ataaccagga acgtcaagcc aagccagacc ccgcagccga aggacaagtg aagcagcccc
660
ctgagcctca caaggacctc ctggctgggtg aggagggggc cgcgccaggc tcccaggcct
720

```

ccacagagtc ttcagcgcat cccccaacag cagcccctgc cagtccctcg ggtccaggca
 780
 aggccctggg ggtctcctta aatgccacct cgggcaagtc ccagtcccag tcctcggcca
 840
 cccccagctc tggatcccag ggccagctgc cctctggctc tggctgtggc tcccgcctgt
 900
 ccggcagggc ccagggccag cgtcggggcac agggcagctc ccactggtct cggcaacaca
 960
 cccagccgcc tggtaacttc tccagcccct cccagtcagc cctcccgctc tcggggcccc
 1020
 tgcagccacc caacgtcacc tccagcccgg tctcaccat ggtccagtct cccagcagca
 1080
 gcaacatccc cagcagccc cccagcaagt cctctggcaa gccggaggac gcagccccc
 1140
 agaccagcgg acagcgccag aaggaatcgt cgaaacagcc tgccagcagc gcctcagtgc
 1200
 ccgagctggg cccctgccat tccgggacct ctctggagta cacttcggag tccaccaccg
 1260
 agatcacctg cagctggcca caccacaggc ccccgctgct gcagcactac tgggtgctga
 1320
 aacacctggc ctgctaggag gctccaataa agctaaccgg gaccagaaaa aaaaaaa
 1377

<210> 2954

<211> 181

<212> PRT

<213> Homo sapiens

<400> 2954

Leu	Arg	Gln	Arg	Val	Glu	His	Phe	Leu	Glu	Gln	Arg	Asn	Leu	Val	Thr
1				5					10					15	
Glu	Val	Leu	Gly	Ala	Leu	Glu	Ala	Lys	Thr	Gly	Val	Glu	Lys	Arg	Tyr
			20					25					30		
Leu	Ala	Ala	Gly	Ala	Val	Thr	Leu	Leu	Ser	Leu	Tyr	Leu	Leu	Phe	Gly
			35				40					45			
Tyr	Gly	Ala	Ser	Leu	Leu	Cys	Asn	Leu	Ile	Gly	Phe	Val	Tyr	Pro	Ala
			50			55					60				
Tyr	Ala	Ser	Ile	Lys	Ala	Ile	Glu	Ser	Pro	Ser	Lys	Asp	Asp	Asp	Thr
65					70				75					80	
Val	Trp	Leu	Thr	Tyr	Trp	Val	Val	Tyr	Ala	Leu	Phe	Gly	Leu	Ala	Glu
			85					90					95		
Phe	Phe	Ser	Asp	Leu	Leu	Leu	Ser	Trp	Phe	Pro	Phe	Tyr	Tyr	Val	Gly
			100				105						110		
Lys	Cys	Ala	Phe	Leu	Leu	Phe	Cys	Met	Ala	Pro	Arg	Pro	Trp	Asn	Gly
			115				120					125			
Ala	Leu	Met	Leu	Tyr	Gln	Arg	Val	Val	Arg	Pro	Leu	Phe	Leu	Arg	His
			130			135					140				
His	Gly	Ala	Val	Asp	Arg	Ile	Met	Asn	Asp	Leu	Ser	Gly	Arg	Ala	Leu
145					150				155					160	
Asp	Ala	Ala	Ala	Gly	Ile	Thr	Arg	Asn	Val	Lys	Pro	Ser	Gln	Thr	Pro
				165					170					175	
Gln	Pro	Lys	Asp	Lys											
				180											

<210> 2955
 <211> 295
 <212> DNA
 <213> Homo sapiens

<400> 2955
 acgcgtgaag ggggtgagaat atgttttccc tggctcaact taccacacct caatgcctac
 60
 agatgtgtta tcacctaact gttcacttgt ttctgtcatg tgttttcatg tccatttcac
 120
 aaggcatgcc ctgccctgt ctcactttcc ccttattctg gcatatcaac tcgtatttcc
 180
 caatttccca ctataaaggg catacagtgc taccacttcc tctctcctcc aaaatagctt
 240
 ctccaccatt ctcactcatt atagggatta gcaagcaagc cgctgctcaa gccag
 295

<210> 2956
 <211> 91
 <212> PRT
 <213> Homo sapiens

<400> 2956
 Met Phe Ser Leu Ala Gln Leu Thr Thr Pro Gln Cys Leu Gln Met Cys
 1 5 10 15
 Tyr His Leu Thr Val His Leu Phe Leu Ser Cys Val Phe Met Ser Ile
 20 25 30
 Ser Gln Gly Met Pro Cys Pro Cys Leu Thr Phe Pro Leu Phe Trp His
 35 40 45
 Ile Asn Ser Tyr Phe Pro Ile Ser His Tyr Lys Gly His Thr Val Leu
 50 55 60
 Pro Leu Pro Leu Ser Ser Lys Ile Ala Ser Pro Pro Phe Ser Leu Ile
 65 70 75 80
 Ile Gly Ile Ser Lys Gln Ala Ala Ala Gln Ala
 85 90

<210> 2957
 <211> 4724
 <212> DNA
 <213> Homo sapiens

<400> 2957
 ctgaattgaa caacagtctt catccaacac tccaaaccag ttggcagggt aggacccttg
 60
 gtgtgggggtg ttggatgaag actgttgttc aattcagggg ccggtggggc tgagggtttc
 120
 tgtgggggaa gacctgatac cgccaggccc cgaagccctt caggagccag tcggtggggg
 180
 tcctcactta cagggtaaaa acgggtgtct tgagggtgggc cctgaccagg aaacgctgag
 240
 ccgggacctc gcgtgattct cggaaccgga ggagaagcgg cgtccggggc tatggctgtg
 300
 actctggaca aagacgctta ttatcggcga gtgaagagac tgtacagcaa ttggcggaaa
 360

ggagaagatg agtatgccaa cgttgatgcc attgttgtat cagtgggtgt tgatgaagaa
420
attgtttatg ccaaatacaac tgccttacag acatggctct ttggttatga actaactgat
480
actatcatgg tcttttgtga tgacaaaatc atctttatgg ccagcaagaa aaaagtggag
540
ttcttgaaac agattgccaa cactaagggc aatgagaatg ctaatggagc ccttgccatc
600
acactgctaa tacgagaaaa gaatgaaagt aataagagta gctttgacaa aatgattgaa
660
gccattaaag aaagcaagaa tggcaagaag attggagtgt tcagcaaaga caaattccct
720
ggagagttca tgaagagctg gaatgactgc ctcaacaaag aaggctttga caaaatagat
780
atcagtgcag ttgtggcata taccatcgct gtgaaggagg atggggagct caacctaag
840
aagaaagcag ccagcatcac ttctgaagtc ttcaacaaat tcttcaagga aagagtcatg
900
gaaatagttg atgcagatga gaaagttcga cacagcaaac tggctgagtc tgtggaaaag
960
gccattgaag agaaaaaata ccttgctggg gcagaccctt ctactgtgga aatgtgttac
1020
cctcctatca ttcagagtgg tggcaactat aatctcaagt tcagtgtggt gagtgcacag
1080
aatcatatgc actttggggc tatcacttgt gccatgggta ttcgcttcaa gtcttactgc
1140
tccaaccttg ttcgcacttt gatggttgat ccttctcaag aagttcaaga aaattataac
1200
tttttgctcc agcttcaaga ggagctgctg aaggaattaa gacatggtgt gaagatatgt
1260
gacgtgtata acgctgtcat ggacgtgggt aaaaagcaga agccagaact gctgaacaaa
1320
attacaaaaa acctaggggt tgggatggga attgaattcc gtgaaggctc cctagtaatc
1380
aatagcaaaa atcaatacaa actgaagaaa ggaatggttt tcagcatcaa tttaggatc
1440
tcagacctga ctaacaagga ggggaaaaag cccgaagaga aaacctatgc cctgttcatt
1500
ggtgacacag tgcttgtgga tgaggatggc ccagctactg ttctcacttc tgtgaagaag
1560
aaagtgaaga atgtggggat tttcctaaag aatgaagatg aggaagaaga ggaggaggag
1620
aaagatgagg cagaggacct tttgggaaga ggttctcggg cagcattact tacagaaaga
1680
acaagaaatg aaatgactgc agaagagaag cgaagagcac atcagaaaga actagcggct
1740
caactcaatg aagaagcaaa gaggcgattg actgaacaaa agggagaaca gcagattcag
1800
aaagctcgca agtctaattgt gtcctataaa aacccatctc tgatgcctaa ggaaccgcat
1860
attcgggaaa tgaagatcta catcgataag aaatatgaga ctgtaataat gcccggtgtt
1920
ggcattgcaa caccgtttca cattgccaca atcaagaata taagtatgtc cgtggaagga
1980

gattatactt acttgcgaat caacttttat tgcccaggca gtgctctggg caggaatgaa
2040
ggcaacatct ttcctaacct tgaagcgact tttgtcaagg aaattacata ccgagcatca
2100
aatattaagg caccgggaga acagacagta ccagccttga accttcagaa tgctttccga
2160
attattaaag aagtacagaa acgttataaa actcgagaag ctgaagagaa agagaaggag
2220
ggcattgtaa aacaagactc actggtgatc aatctaaacc ggagtaatcc gaaactgaaa
2280
gatctataca ttcgccccaa tattgcccac aagaggatgc aaggctcact ggaggcccat
2340
gtcaatggct tccgcttcac atctgttcga ggagacaaag tggatatttt gtacaataat
2400
attaagcatg ctttgttcca gccctgtgat ggagaaatga ttattgtctt gcactttcac
2460
ctcaagaatg ccatcatgtt tgggaagaag cggcacacgg atgtgcagtt ctacacagaa
2520
gtgggagaga taaccacgga cttggggaaa catcagcata tgcattgacc agatgacctc
2580
tatgctgagc agatggaacg agaaatgagg cacaaactga aaacagcctt taaaaatttc
2640
attgagaaaag tagaggctct aactaaggag gaactggaat ttgaagtgcc ttttagggac
2700
ttgggattta acggagctcc ctataggagt acctgcctcc ttcagcccac tagtagtgcg
2760
ctggtaaatg ctacggaatg gccacctttt gtggtgacat tggatgaggt agagctgac
2820
cactttgagc ggggccagtt tcacctgaag aactttgata tggtaatcgt ctacaaggac
2880
tacagcaaga aagtgaccat gatcaacgcc attcctgtag cctctcttga ccccatcaag
2940
gaatggttga attcctgcga cctgaaatac acagaaggag tacagtccct caactggact
3000
aaaatcatga agaccattgt tgatgacctt gagggcttct tcgaacaagg tggctggctc
3060
ttcctggagc ctgaggggtga ggggagtgat gctgaagaag gggattcaga gtctgaaatt
3120
gaagatgaga cttttaatcc ttcagaagat gactatgaag aggaagagga ggacagtgat
3180
gaagattatt catcagaagc agaagagtca gactattcta aggagtcatt gggtagtgaa
3240
gaagagagtg gaaaggattg ggatgaactg gaggaagaag cccgaaaagc ggaccgagaa
3300
agtcgttacg aggaagaaga agaacaaagt cgaagtatga gccggaagag gaaggcatct
3360
gtgcacagtt cgggccgtgg ctctaaccgt ggttccagac acagctctgc acccccaaag
3420
aaaaagagga agtaacttct gaactttggc cctgagctcc attcttctc cagctaacct
3480
ctgaaaattt tacatgacat agaaactgta tttttccttt cgttttctatt tgaagttttg
3540
ccatttgtgt ttatgggttt agggggccat ttgtgtggac caatctactc ggggaattcc
3600

aggcccacca ggacacgtgc caatggcccc attcagatgg caagggagga ggtgttcttg
 3660
 aagacaggag gaggtccccg ctgtaataa atattgtttc attcttctct ctctctgtca
 3720
 ccttctgcca agacattgat ggcttctgac atcttatttg gtgtctcaaa gctgtatttc
 3780
 caagacagtg gtacaagggtg acccttaatt acccgtatca tggttcttga ccagcacatt
 3840
 caatcctcca acctacccta ctgccatgac cttccgcaca tctctaagtt ttatctttgc
 3900
 aatactcaag gttctcggaa atttgcta atgtgtgata aaccatacag cttgagccag
 3960
 tgaggcagat tgggctgggtg ccttcgtctg agttttcttg ctttctgccc tcgtgcagat
 4020
 tctgaggtat atctgctgcc ttggaagaca taagaagcag tgatactccc tggctcgggt
 4080
 attttctcca tacaatgcac acatggtaca atgatagaag gcaaaattgc cactgtcttc
 4140
 tttttttct catatatcta aggaagatat atcagggttg gcctcatgta ccgcttctag
 4200
 tgaaatgtag aggaaggctc aaaggagtca acatttagat ctggaaggga caagtcatgc
 4260
 cttgggcta gaataccctg atgagaaaag agaagaggaa gggaggccat atctacaaca
 4320
 cagcctctcg gcactgctgc tccttatttt aactttgtct tgcattgtcc tgtatttatc
 4380
 acagtttctg ttgaacagct tttcaagtat ttggggagtt tatcttgcca tcctccctt
 4440
 ctggttctct gcacccacct gtcccactgc agttccttcc gtgctctgtg actttaagag
 4500
 aagaaggggg gaggggtccc ggattttatg tttgtttgtt ttttctcctt agcagtagga
 4560
 cttgatattt tcaattttgg aagaactaaa agatgaataa actgggtttt ttttgttggt
 4620
 tgtttttgta aaaaaaaaaa aaaaaaaaaa aaccaaaaaa attaaaaaaa aaaaaaaaaa
 4680
 aaaaaccccc caagggggccc cccccgaaa aaaaaaaaaa aaaa
 4724

<210> 2958

<211> 1047

<212> PRT

<213> Homo sapiens

<400> 2958

Met	Ala	Val	Thr	Leu	Asp	Lys	Asp	Ala	Tyr	Tyr	Arg	Arg	Val	Lys	Arg
1				5				10					15		
Leu	Tyr	Ser	Asn	Trp	Arg	Lys	Gly	Glu	Asp	Glu	Tyr	Ala	Asn	Val	Asp
			20					25					30		
Ala	Ile	Val	Val	Ser	Val	Gly	Val	Asp	Glu	Glu	Ile	Val	Tyr	Ala	Lys
		35					40					45			
Ser	Thr	Ala	Leu	Gln	Thr	Trp	Leu	Phe	Gly	Tyr	Glu	Leu	Thr	Asp	Thr
	50					55					60				
Ile	Met	Val	Phe	Cys	Asp	Asp	Lys	Ile	Ile	Phe	Met	Ala	Ser	Lys	Lys

65					70					75				80	
Lys	Val	Glu	Phe	Leu	Lys	Gln	Ile	Ala	Asn	Thr	Lys	Gly	Asn	Glu	Asn
				85					90				95		
Ala	Asn	Gly	Ala	Pro	Ala	Ile	Thr	Leu	Leu	Ile	Arg	Glu	Lys	Asn	Glu
			100					105					110		
Ser	Asn	Lys	Ser	Ser	Phe	Asp	Lys	Met	Ile	Glu	Ala	Ile	Lys	Glu	Ser
		115					120					125			
Lys	Asn	Gly	Lys	Lys	Ile	Gly	Val	Phe	Ser	Lys	Asp	Lys	Phe	Pro	Gly
		130				135					140				
Glu	Phe	Met	Lys	Ser	Trp	Asn	Asp	Cys	Leu	Asn	Lys	Glu	Gly	Phe	Asp
145					150					155					160
Lys	Ile	Asp	Ile	Ser	Ala	Val	Val	Ala	Tyr	Thr	Ile	Ala	Val	Lys	Glu
				165					170					175	
Asp	Gly	Glu	Leu	Asn	Leu	Met	Lys	Lys	Ala	Ala	Ser	Ile	Thr	Ser	Glu
			180					185					190		
Val	Phe	Asn	Lys	Phe	Phe	Lys	Glu	Arg	Val	Met	Glu	Ile	Val	Asp	Ala
		195					200					205			
Asp	Glu	Lys	Val	Arg	His	Ser	Lys	Leu	Ala	Glu	Ser	Val	Glu	Lys	Ala
		210				215					220				
Ile	Glu	Glu	Lys	Lys	Tyr	Leu	Ala	Gly	Ala	Asp	Pro	Ser	Thr	Val	Glu
225					230					235					240
Met	Cys	Tyr	Pro	Pro	Ile	Ile	Gln	Ser	Gly	Gly	Asn	Tyr	Asn	Leu	Lys
			245					250						255	
Phe	Ser	Val	Val	Ser	Asp	Lys	Asn	His	Met	His	Phe	Gly	Ala	Ile	Thr
			260					265					270		
Cys	Ala	Met	Gly	Ile	Arg	Phe	Lys	Ser	Tyr	Cys	Ser	Asn	Leu	Val	Arg
		275					280					285			
Thr	Leu	Met	Val	Asp	Pro	Ser	Gln	Glu	Val	Gln	Glu	Asn	Tyr	Asn	Phe
		290				295						300			
Leu	Leu	Gln	Leu	Gln	Glu	Leu	Leu	Lys	Glu	Leu	Arg	His	Gly	Val	
305					310				315					320	
Lys	Ile	Cys	Asp	Val	Tyr	Asn	Ala	Val	Met	Asp	Val	Val	Lys	Lys	Gln
			325					330					335		
Lys	Pro	Glu	Leu	Leu	Asn	Lys	Ile	Thr	Lys	Asn	Leu	Gly	Phe	Gly	Met
			340					345					350		
Gly	Ile	Glu	Phe	Arg	Glu	Gly	Ser	Leu	Val	Ile	Asn	Ser	Lys	Asn	Gln
		355				360					365				
Tyr	Lys	Leu	Lys	Lys	Gly	Met	Val	Phe	Ser	Ile	Asn	Leu	Gly	Phe	Ser
		370			375						380				
Asp	Leu	Thr	Asn	Lys	Glu	Gly	Lys	Lys	Pro	Glu	Glu	Lys	Thr	Tyr	Ala
385					390					395					400
Leu	Phe	Ile	Gly	Asp	Thr	Val	Leu	Val	Asp	Glu	Asp	Gly	Pro	Ala	Thr
			405					410					415		
Val	Leu	Thr	Ser	Val	Lys	Lys	Lys	Val	Lys	Asn	Val	Gly	Ile	Phe	Leu
			420					425					430		
Lys	Asn	Glu	Asp	Glu	Glu	Glu	Glu	Glu	Glu	Lys	Asp	Glu	Ala	Glu	
		435				440					445				
Asp	Leu	Leu	Gly	Arg	Gly	Ser	Arg	Ala	Ala	Leu	Leu	Thr	Glu	Arg	Thr
		450				455					460				
Arg	Asn	Glu	Met	Thr	Ala	Glu	Glu	Lys	Arg	Arg	Ala	His	Gln	Lys	Glu
465					470					475					480
Leu	Ala	Ala	Gln	Leu	Asn	Glu	Glu	Ala	Lys	Arg	Arg	Leu	Thr	Glu	Gln
			485					490					495		
Lys	Gly	Glu	Gln	Gln	Ile	Gln	Lys	Ala	Arg	Lys	Ser	Asn	Val	Ser	Tyr

			500					505					510			
Lys	Asn	Pro	Ser	Leu	Met	Pro	Lys	Glu	Pro	His	Ile	Arg	Glu	Met	Lys	
		515					520					525				
Ile	Tyr	Ile	Asp	Lys	Lys	Tyr	Glu	Thr	Val	Ile	Met	Pro	Val	Phe	Gly	
	530					535					540					
Ile	Ala	Thr	Pro	Phe	His	Ile	Ala	Thr	Ile	Lys	Asn	Ile	Ser	Met	Ser	
545					550					555					560	
Val	Glu	Gly	Asp	Tyr	Thr	Tyr	Leu	Arg	Ile	Asn	Phe	Tyr	Cys	Pro	Gly	
			565					570						575		
Ser	Ala	Leu	Gly	Arg	Asn	Glu	Gly	Asn	Ile	Phe	Pro	Asn	Pro	Glu	Ala	
		580					585						590			
Thr	Phe	Val	Lys	Glu	Ile	Thr	Tyr	Arg	Ala	Ser	Asn	Ile	Lys	Ala	Pro	
	595					600						605				
Gly	Glu	Gln	Thr	Val	Pro	Ala	Leu	Asn	Leu	Gln	Asn	Ala	Phe	Arg	Ile	
	610				615					620						
Ile	Lys	Glu	Val	Gln	Lys	Arg	Tyr	Lys	Thr	Arg	Glu	Ala	Glu	Glu	Lys	
625				630						635					640	
Glu	Lys	Glu	Gly	Ile	Val	Lys	Gln	Asp	Ser	Leu	Val	Ile	Asn	Leu	Asn	
			645					650					655			
Arg	Ser	Asn	Pro	Lys	Leu	Lys	Asp	Leu	Tyr	Ile	Arg	Pro	Asn	Ile	Ala	
		660					665						670			
Gln	Lys	Arg	Met	Gln	Gly	Ser	Leu	Glu	Ala	His	Val	Asn	Gly	Phe	Arg	
	675				680							685				
Phe	Thr	Ser	Val	Arg	Gly	Asp	Lys	Val	Asp	Ile	Leu	Tyr	Asn	Asn	Ile	
	690				695					700						
Lys	His	Ala	Leu	Phe	Gln	Pro	Cys	Asp	Gly	Glu	Met	Ile	Ile	Val	Leu	
705				710					715						720	
His	Phe	His	Leu	Lys	Asn	Ala	Ile	Met	Phe	Gly	Lys	Lys	Arg	His	Thr	
			725						730					735		
Asp	Val	Gln	Phe	Tyr	Thr	Glu	Val	Gly	Glu	Ile	Thr	Thr	Asp	Leu	Gly	
		740						745					750			
Lys	His	Gln	His	Met	His	Asp	Arg	Asp	Asp	Leu	Tyr	Ala	Glu	Gln	Met	
	755					760						765				
Glu	Arg	Glu	Met	Arg	His	Lys	Leu	Lys	Thr	Ala	Phe	Lys	Asn	Phe	Ile	
	770					775					780					
Glu	Lys	Val	Glu	Ala	Leu	Thr	Lys	Glu	Glu	Leu	Glu	Phe	Glu	Val	Pro	
785				790						795					800	
Phe	Arg	Asp	Leu	Gly	Phe	Asn	Gly	Ala	Pro	Tyr	Arg	Ser	Thr	Cys	Leu	
			805					810						815		
Leu	Gln	Pro	Thr	Ser	Ser	Ala	Leu	Val	Asn	Ala	Thr	Glu	Trp	Pro	Pro	
		820						825					830			
Phe	Val	Val	Thr	Leu	Asp	Glu	Val	Glu	Leu	Ile	His	Phe	Glu	Arg	Val	
	835					840						845				
Gln	Phe	His	Leu	Lys	Asn	Phe	Asp	Met	Val	Ile	Val	Tyr	Lys	Asp	Tyr	
	850				855						860					
Ser	Lys	Lys	Val	Thr	Met	Ile	Asn	Ala	Ile	Pro	Val	Ala	Ser	Leu	Asp	
865				870						875					880	
Pro	Ile	Lys	Glu	Trp	Leu	Asn	Ser	Cys	Asp	Leu	Lys	Tyr	Thr	Glu	Gly	
			885					890						895		
Val	Gln	Ser	Leu	Asn	Trp	Thr	Lys	Ile	Met	Lys	Thr	Ile	Val	Asp	Asp	
		900						905					910			
Pro	Glu	Gly	Phe	Phe	Glu	Gln	Gly	Gly	Trp	Ser	Phe	Leu	Glu	Pro	Glu	
	915					920						925				
Gly	Glu	Gly	Ser	Asp	Ala	Glu	Glu	Gly	Asp	Ser	Glu	Ser	Glu	Ile	Glu	

930		935		940
Asp Glu Thr Phe Asn Pro Ser Glu Asp Asp Tyr Glu Glu Glu Glu Glu				
945		950		955
Asp Ser Asp Glu Asp Tyr Ser Ser Glu Ala Glu Glu Ser Asp Tyr Ser				960
	965		970	975
Lys Glu Ser Leu Gly Ser Glu Glu Glu Ser Gly Lys Asp Trp Asp Glu				
	980		985	990
Leu Glu Glu Glu Ala Arg Lys Ala Asp Arg Glu Ser Arg Tyr Glu Glu				
	995		1000	1005
Glu Glu Glu Gln Ser Arg Ser Met Ser Arg Lys Arg Lys Ala Ser Val				
	1010		1015	1020
His Ser Ser Gly Arg Gly Ser Asn Arg Gly Ser Arg His Ser Ser Ala				
1025		1030		1035
Pro Pro Lys Lys Lys Arg Lys				1040
	1045			

<210> 2959

<211> 3323

<212> DNA

<213> Homo sapiens

<400> 2959

```

ttcacgtgac cgcggacagc ttaaggaccc cgcaccccag tgcgcctgcg ctggagctcc
60
gggaagtgtc cggacccgga acgcaggcgg agcgcaagtc cgtcagccag tcagtcggcc
120
agtccgccag cccagtacct ctctctcttc ggccctcgta agctgtccgc ggtctgtttg
180
gcccgaacgg cggcggaggc gctgatcatg gcgacattca tctcggtgca gctgaaaaag
240
acctcagagg tggacctggc caagccgctg gtgaagttca tccagcagac ttaccaagc
300
ggcgggggaag agcaggccca gtactgccgc gcggcgagg agctcagcaa gctgcgccgc
360
gccgcagtcg gtcgtccgct ggacaagcac gagggcgcgc tcgagacgct cctgagatat
420
tatgatcaga tttgttctat tgaacccaaa ttccatttt ctgaaaatca gatctgcttg
480
acatttacct ggaaggatgc tttcgataaa ggttcacttt ttggaggctc tgtaaaactg
540
gctcttgcaa gcttaggata tgaaaagagc tgtgtgttgt tcaattgtgc agccttagct
600
agccaaattg cagcagaaca gaacctggat aatgatgaag gattgaaaat cgctgctaaa
660
cattaccagt ttgctagtgg tgccttttta catattaaag agacggtttt atctgcctta
720
agtcgagagc cgaccgtgga catatctcca gatactgttg ggaccctcag tcttattatg
780
ctggcacagg ctcaagaagt atttttttta aaagccacaa gagataaaat gaaagatgcc
840
atcatagcta aattggctaa tcaggctgca gattattttg gtgatgcttt caaacagtgt
900
caatacaaag atactctccc caaggagggtg ttccctgtct tggctgcaaa gcactgtatc
960

```

atgcaggcca atgctgagta ccatcagtct atcctggcaa aacagcagaa gaaatttgga
1020
gaagaaattg caaggttaca gcatgcagca gaactgatta aaacagtggc atctcgctat
1080
gatgaatatg ttaatgtgaa ggatttttct gacaaaatca atcgtgccct tgctgcagca
1140
aagaaggata atgacttcat ttatcatgat cgagttccag accttaaaga tctagatcct
1200
attggcaaag ccacacttgt gaaatctacc cgggtcaatg taccatcag tcagaaattt
1260
actgatctgt ttgagaagat ggttcccggtg tcagtacagc agtctttggc tgcctataat
1320
cagaggaaaag ccgatttggt taacagatca attgctcaga tgagagaagc caccactttg
1380
gcaaatgggg tgctagcttc ccttaatctt ccagcagcaa ttgaagatgt gtctggagac
1440
actgtacctc agtctatatt gactaaatcc agatctgtga ttgaacaggg aggcattccag
1500
actggtgatc agctgataaa agagctgcct gagctgtctac aaagaaatag ggaaatatta
1560
gaggagtcac taagattggt ggatgaagaa gaagcaactg ataatgactt aagagcaaaa
1620
ttcaaggacc ggtggcaaag gactccatcc aatgacctgt ataagccttt aagagcagag
1680
ggaaccaact tcagaacagt tttagataaa gctgtgcagg cagatggaca agtgaaagaa
1740
tgttaccagt ctcatcgtga caccatcgtg cttttgtgta agccagagcc tgagctgaat
1800
gctgccatcc cttctgctaa tccagcaaag accatgcagg gcagtgaggt tgtaaatgtc
1860
ttaaaatcct tattgtcaaa tcttgatgaa gtaaagaagg aaagagaggg tctggagaat
1920
gacttgaaat ctgtgaattt tgacatgaca agcaagtttt tgacagccct ggctcaagat
1980
ggtgtgataa atgaagaagc tctttctggt actgaactag atcagagtcta tggaggtctt
2040
acaactaaag tccaagaatc tctaaagaaa caggaggggac ttcttaaaaa tattcaggtc
2100
tcacatcagg aattttcaaa aatgaaacaa tctaataatg aagctaactt aagagaagaa
2160
gttttgaaga atttagctac tgcatatgac aactttgttg aacttgtagc taatttgaag
2220
gaaggcacia agttttacaa tgagttgact gaaatcctgg tcaggttcca gaacaaatgc
2280
agtgatatag tttttgcacg gaagacagaa agagatgaac tcttaaagga cttgcaacaa
2340
agcattgcca gagaacctag tgctccttca attcctacac ctgcgtatca gtccttacca
2400
gcaggaggac atgcaccaac tctccaact ccagcgccaa gaacctatgcc gcctactaag
2460
cccagcccc cagccaggcc tccaccacct gtgcttccag caaatcgagc tctttctgct
2520
actgtccat ctccagtggg ggtggggact gctgcgccag ctccatcaca aacgcctggc
2580

tcagctcctc ctccacaggc gcagggacca ccctatccca cctatccagg atatcctggg
 2640
 tattgccaaa tgcccatgcc catgggctat aatccttatg cgtatggcca gtataatatg
 2700
 ccatatccac cagtgtatca ccagagtcct ggacaggctc cataccggg accccagcag
 2760
 ccttcatacc ccttccctca gccccacag cagtcttact atccacagca gtaatatgtc
 2820
 tgctcagcag ctcagctgat tcagatcaga gggaaagaaa taccaaccct gcaataagtg
 2880
 tactaaactc tacgctctgg ttaatgtaat gtactctcct ggactgaatg cagtgtataa
 2940
 tttctgtcta cagctagaag ctgtgcccc gttccacatt tgattacaca tgtgagattt
 3000
 gctgctgttg cagtataaac actaggtata ataggatttg aaattgcatt acagttcata
 3060
 aaaattgaaa atgagaaatt aaacctgcaa gtgaaacatt tgaaacgatt atactttcta
 3120
 cataagacat gggtgggaca tcagatactt acaaagatgg tttaagtatg gatactagag
 3180
 aaaattaagt tttctttctc tttggtttat tgatttggtt taatttccat tatgctattt
 3240
 tgcataatca aggcactgta aatcttataa ttttaaaata aattacttaa gaacaaaaaa
 3300
 aaaaaaaaaa aaaaaaaaaa aaa
 3323

<210> 2960

<211> 868

<212> PRT

<213> Homo sapiens

<400> 2960

Met	Ala	Thr	Phe	Ile	Ser	Val	Gln	Leu	Lys	Lys	Thr	Ser	Glu	Val	Asp
1				5					10					15	
Leu	Ala	Lys	Pro	Leu	Val	Lys	Phe	Ile	Gln	Gln	Thr	Tyr	Pro	Ser	Gly
			20					25					30		
Gly	Glu	Glu	Gln	Ala	Gln	Tyr	Cys	Arg	Ala	Ala	Glu	Glu	Leu	Ser	Lys
		35					40					45			
Leu	Arg	Arg	Ala	Ala	Val	Gly	Arg	Pro	Leu	Asp	Lys	His	Glu	Gly	Ala
	50					55				60					
Leu	Glu	Thr	Leu	Leu	Arg	Tyr	Tyr	Asp	Gln	Ile	Cys	Ser	Ile	Glu	Pro
65					70					75				80	
Lys	Phe	Pro	Phe	Ser	Glu	Asn	Gln	Ile	Cys	Leu	Thr	Phe	Thr	Trp	Lys
				85					90					95	
Asp	Ala	Phe	Asp	Lys	Gly	Ser	Leu	Phe	Gly	Gly	Ser	Val	Lys	Leu	Ala
			100					105					110		
Leu	Ala	Ser	Leu	Gly	Tyr	Glu	Lys	Ser	Cys	Val	Leu	Phe	Asn	Cys	Ala
		115					120					125			
Ala	Leu	Ala	Ser	Gln	Ile	Ala	Ala	Glu	Gln	Asn	Leu	Asp	Asn	Asp	Glu
		130				135					140				
Gly	Leu	Lys	Ile	Ala	Ala	Lys	His	Tyr	Gln	Phe	Ala	Ser	Gly	Ala	Phe
145					150					155				160	
Leu	His	Ile	Lys	Glu	Thr	Val	Leu	Ser	Ala	Leu	Ser	Arg	Glu	Pro	Thr

2195

595 600 605
 Gly Gly Leu Thr Thr Lys Val Gln Glu Ser Leu Lys Lys Gln Glu Gly
 610 615 620
 Leu Leu Lys Asn Ile Gln Val Ser His Gln Glu Phe Ser Lys Met Lys
 625 630 635 640
 Gln Ser Asn Asn Glu Ala Asn Leu Arg Glu Glu Val Leu Lys Asn Leu
 645 650 655
 Ala Thr Ala Tyr Asp Asn Phe Val Glu Leu Val Ala Asn Leu Lys Glu
 660 665 670
 Gly Thr Lys Phe Tyr Asn Glu Leu Thr Glu Ile Leu Val Arg Phe Gln
 675 680 685
 Asn Lys Cys Ser Asp Ile Val Phe Ala Arg Lys Thr Glu Arg Asp Glu
 690 695 700
 Leu Leu Lys Asp Leu Gln Ser Ile Ala Arg Glu Pro Ser Ala Pro
 705 710 715 720
 Ser Ile Pro Thr Pro Ala Tyr Gln Ser Leu Pro Ala Gly Gly His Ala
 725 730 735
 Pro Thr Pro Pro Thr Pro Ala Pro Arg Thr Met Pro Pro Thr Lys Pro
 740 745 750
 Gln Pro Pro Ala Arg Pro Pro Pro Pro Val Leu Pro Ala Asn Arg Ala
 755 760 765
 Pro Ser Ala Thr Ala Pro Ser Pro Val Gly Ala Gly Thr Ala Ala Pro
 770 775 780
 Ala Pro Ser Gln Thr Pro Gly Ser Ala Pro Pro Pro Gln Ala Gln Gly
 785 790 795 800
 Pro Pro Tyr Pro Thr Tyr Pro Gly Tyr Pro Gly Tyr Cys Gln Met Pro
 805 810 815
 Met Pro Met Gly Tyr Asn Pro Tyr Ala Tyr Gly Gln Tyr Asn Met Pro
 820 825 830
 Tyr Pro Pro Val Tyr His Gln Ser Pro Gly Gln Ala Pro Tyr Pro Gly
 835 840 845
 Pro Gln Gln Pro Ser Tyr Pro Phe Pro Gln Pro Pro Gln Gln Ser Tyr
 850 855 860
 Tyr Pro Gln Gln
 865

<210> 2961

<211> 434

<212> DNA

<213> Homo sapiens

<400> 2961

gccgcggctc cagggaaacgg ccgcgcacgc gcgccccggc tgcttctgct ctttctgggt
 60
 ccgctgctgt gggccccggc tgcggtccgg gccggcccag atgaagacct tagcnaccgg
 120
 aacaaagaac cgccggcgcc ggcccagcag ctgcagccgc agcctgtggc tgtgcagggc
 180
 cccgagccgg cccgggtcga ggctaatttt tgtatttttt ttgtagagac aggatttcgc
 240
 catgttgacc agtgggtctca agctcctggg ctcaagtaat ccgcccgaact cgggtctccca
 300
 aagtgtggg attacaggca tgagccaccg tgccctggcca gattttgttt ggctatgcc
 360

ccacagtcacat ccccaggggtc tatacatact atgtttcaac tgtattatatt gccatttttg
420
gcattagaat gcat
434

<210> 2962
<211> 92
<212> PRT
<213> Homo sapiens

<400> 2962
Ala Ala Ala Pro Gly Asn Gly Arg Ala Ser Ala Pro Arg Leu Leu Leu
1 5 10 15
Leu Phe Leu Val Pro Leu Leu Trp Ala Pro Ala Ala Val Arg Ala Gly
20 25 30
Pro Asp Glu Asp Leu Ser Xaa Arg Asn Lys Glu Pro Pro Ala Pro Ala
35 40 45
Gln Gln Leu Gln Pro Gln Pro Val Ala Val Gln Gly Pro Glu Pro Ala
50 55 60
Arg Val Glu Ala Asn Phe Cys Ile Phe Phe Val Glu Thr Gly Phe Arg
65 70 75 80
His Val Asp Gln Trp Ser Gln Ala Pro Gly Leu Lys
85 90

<210> 2963
<211> 567
<212> DNA
<213> Homo sapiens

<400> 2963
naccgctgct gccccggctg gaagaggacc agcgggcttc ctggggcctg tggagcaggc
60
gagggctatg tccctcggcg cccgggtgta ggagggcgac tgttcccaa tcttcagca
120
acgtcctctg tgcttttctt gaaccccgag caaagcacca ccttgccgca gagcaccac
180
tccctagcag ctgccccac aggggtgctgg ggacccaact gagctggtga ccagcctccc
240
ccgccccacag caatatgcc gccgccatgc cggaacggag ggagctgtgt ccagcctggc
300
cgctgccgct gccctgcagg atggcggggg gacacttgcc agtcagggtga ggctggctct
360
accctggggg gccctggaag ggtctggggc acctctttgc atgtcgtggg gttactgatg
420
gtccatgagt ggggtggtgt gaaggagct gtgtgggcag gaccctccc gcaggcatgg
480
ccgctgaca ccccgtttcc tgcagatgtg gatgaatgca gtgataggag gggcggctgt
540
ccccagcggg gtgtccacc cgccggg
567

<210> 2964
<211> 115
<212> PRT

<213> Homo sapiens

<400> 2964

```

Ala Gly Asp Gln Pro Pro Pro Pro Thr Ala Ile Cys Gln Pro Pro Cys
 1           5           10           15
Arg Asn Gly Gly Ser Cys Val Gln Pro Gly Arg Cys Arg Cys Pro Ala
          20           25           30
Gly Trp Arg Gly Asp Thr Cys Gln Ser Gly Glu Ala Gly Ser Thr Leu
          35           40           45
Gly Gly Pro Gly Arg Val Trp Gly Thr Ser Leu His Val Val Gly Leu
          50           55           60
Leu Met Val His Glu Trp Val Val Val Lys Gly Ala Val Trp Ala Gly
65           70           75           80
Pro Leu Pro Gln Ala Trp Pro Pro Asp Thr Pro Phe Pro Ala Asp Val
          85           90           95
Asp Glu Cys Ser Asp Arg Arg Gly Gly Cys Pro Gln Arg Cys Val His
          100          105          110
Pro Ala Gly
          115

```

<210> 2965

<211> 3739

<212> DNA

<213> Homo sapiens

<400> 2965

```

acgcgtgggg cttgttttagg ttggccataa gttaagactg gtgccttact ggccaactca
60
tccagctcag cctgggacag ctggttgaac tggagccggt ctccgcctat cccaactggt
120
ggacgtcgaa caattgcata gccgttcctg tagctcagcg tctgacttct gtggaaggct
180
gttttcgtag agtccttaaa ggacgtgccc ggaagaaagg gcaagccatg cacgggattg
240
gacaccattg cagccggccc cgccttccgc tcgtgggagt tccggatggt tagcgttacc
300
atggatcctg gaggtgcccc cgaacactgc ttgtcgctg ggcaaccgga gaggacgaag
360
caggacctag gtggcgggcg tggtaccggc tgcaatggtg tccaatcccg tgcattggctt
420
gccctttctt ccgggcacgt cctttaagga ctctacgaaa acagccttcc acagaagtca
480
gacgtgagc tacaggaacg gctatgcaat tgttcgacgt ccaacagttg ggataggcgg
540
agaccggctc cagttcaacc agctgtccca ggctgagctg gatgagttgg ccagtaaggc
600
accagtctta acttatggcc aacctaaaca agccccacct gcggatttta ttctgcgca
660
tgtggccttt gacaaaaagg tactgaaatt tgatgcctat ttccaagaag atgttcctat
720
gtcaactgag gaacagtata ggatccgtca ggtgaacatt tactattatc tagaagatga
780
cagcatgtct gtcatagagc ctgttgtaga aaattctgga atccttcaag gcaagttaat
840

```

aaaacgccag cggctagcca agaatgaccg gggtgacat taccattgga aagacctaaa
900
tcgaggaata aacatcacaa tttatggcaa aactttccgc gttgttgact gtgaccaatt
960
cacacaggta tttttagaaa gccaaaggaat tgagttaa at ccaccagaga agatggctct
1020
tgatccttac actgaactcc gaaaacagcc tcttcgtaag tatgtcacc catcagactt
1080
tgatcaactc aagcaatttc tcacctttga caaacaggta agtgacatag gaaccacaat
1140
aggcttactt atttccaaat gtgacctaca tttattggca aaagggttg gtagctgtat
1200
tggtaactat tttgaaacat tacagctata attgaactgt ttggacacag tactgtcttt
1260
ctgctttcat caagggttac aggtacagga atgcctacat ttcatatgga gatccaaaga
1320
agatcgtgga gttgcggagt tgttttgtga acctcaccaa acatttaa at ctcaaagcaa
1380
ttcctgagct acatctgctt cccaccttac gtttccaatt gacaatttct ttcctttaa
1440
atgagcta at ttcatagact cctttgtgaa accataaatc gattattagg aaatttcaca
1500
aatatgcata catgtaggtt gtaatgttaa aatgttta at ttcacagaag cccactaca
1560
gatgcttcct tgtaa atgt tatattaata ttggagtcca gaatgttctg agcattttcc
1620
aactctgttc caaccttcct aatcctctcc cttgtgagct gatgtgtata agcagattta
1680
aatccttccc tttctgtact aaaggagaa agaaaaggaa gagatcacc tcagtgttc
1740
tttgctgctc cttttcttta gacatttaac cccttttagt tcagaaaatg taaactagca
1800
ctagcatggc cttttaagga ttttgttcat atcagtcata tatctgttat tattatgtat
1860
ttaaagattg tgtttattcc cagatttga agaagcctag ccaaaaaaaaa aaaaaaaaaag
1920
attgtgttta tattattgct agaagatatg tgttgatggg accaaaaaaaa gactgggtta
1980
taaataaaaa tttttctac actaattata tataaaccat attcacatgt acctttatta
2040
atatatatat accactatgt aaagaacttc attgctcttt taatttagct tctctttcac
2100
tgactaatat tttggatcaa agtgagctct tcttttttgg cacaactta taatcctatt
2160
atttaattct ttccagctgc tgacatatag tacataatt cagatgtttt agtatgtttg
2220
atgaatattt ctttttttcc aatttaccct atctgaaatt acttcatagt ctttccagct
2280
agtctttcca tegtgtgata ataattgcca aagtagccaa gttgaactcc ctacttttag
2340
gattcttgag tcaactactt ggattcttca aaggctcttc gattctatgc aatctgggat
2400
gatacagaca gcatgtatgg tgaatgtcgg acctacatca ttcattacta tcttatggat
2460

gatacgggtgg aaattcgaga ggtccacgaa cggaatgatg ggagagatcc tttcccactc
 2520
 ctaatgaacc gccagcgtgt gcccaaagtt ttggtggaaa atgcaaagaa cttccctcag
 2580
 tgtgtgctag aaatctctga ccaagaagtg ttggaatggt atactgctaa agacttcatt
 2640
 gttgggaagt cactcactat ccttgggaga actttcttca tttatgattg tgatccattt
 2700
 actcgacggg attacaaaga gaagtttgga atcactgatt taccacgtat tgatgtgagc
 2760
 aagcgggaac cacctccagt aaaacaggag ttgcctcctt ataacggttt tggactagt
 2820
 gaagattctg ctccagaattg ttttgctctc attccaaaag ctccaaaaaa agacgttatt
 2880
 aaaatgctgg tgaatgataa caaggtgctt cgttatttgg ctgtactgga atcccccatc
 2940
 ccagaagaca aagaccgcag atttgtcttc tcttactttc tagctaccga catgatcagt
 3000
 atctttgagc ctctgttcg caattctggt atcattgggg gcaagtacct tggcaggact
 3060
 aaagttgtta aaccatactc tacagtggac aaccctgtct actatggccc cagtgacttc
 3120
 ttcattggtg ctgtgattga agtggttggg caccgggtca tcatccttga tacagacgag
 3180
 tatgttttga aatacatgga gagcaacgct gccagattt caccagaagc actcgcgtca
 3240
 attcagaacc atgtccgaaa gcgagaagcg cctgctccag aagcagaaag caagcaaact
 3300
 gaaaaggatc caggcgtgca ggaattggaa gcattaatag acacaattca gaagcaactg
 3360
 aaagatcact catgcaaaga caacattcgt gaggcatttc aaatttatga caaggaagct
 3420
 tcaggatatg tggacagaga catgttcttt aaaatctgtg aatcgcttaa cgtcccagt
 3480
 gatgactcct tggttaagga gttactcagg atgtgctctc atggagaagg caaaattaac
 3540
 tactataact ttgttcgtgc tttctcaaac tgacctgctg atgagaaaat gcaagacaat
 3600
 ttttgatact ggaactatgc tttgaaatac accttacact cttcatagag gcatttacag
 3660
 ggttcctgaa gttttatttc tgttttgggt cttatttcac tcctactgaa gtcgaaacta
 3720
 aattggatca aaaaaaaaaa
 3739

<210> 2966

<211> 386

<212> PRT

<213> Homo sapiens

<400> 2966

Met	Tyr	Gly	Glu	Cys	Arg	Thr	Tyr	Ile	Ile	His	Tyr	Tyr	Leu	Met	Asp
1				5				10					15		
Asp	Thr	Val	Glu	Ile	Arg	Glu	Val	His	Glu	Arg	Asn	Asp	Gly	Arg	Asp

```
<210> 2967
<211> 1103
<212> DNA
<213> Homo sapiens

<400> 2967
```

cctgctctgt agagccggcg gcaaccgggt agcttggcca ggttgtgagg aaccgcagcg
 60
 cccgcaggac cgggccgctg agcctgcagc cgccccgcgc cgtgacctgc gaccctagac
 120
 cccgactacc ctttggctca gcccgcgcgc ccagggcccg gcccgggcgg cgcgacggga
 180
 ggatgagcgg cgggcggcgg aaggaggagc cgcctcagcc gcagctggcc aacggggccc
 240
 tcaaagtctc cgtctggagt aaggtgctgc ggagcggcgg cctgggagga taaggatgaa
 300
 tttttagatg tgatctactg gttccgacag atcattgctg tggctctggg tgtcatttgg
 360
 ggagttttgc cattacgagg gttcttggga atagcaggat tctgcctgat caatgcagga
 420
 gtcctgtacc tctacttcag caattaccta cagattgatg aggaagaata tgggtggcacg
 480
 tgggagctca cgaaggaagg gtttatgacc tcttttgcen ttgttcatgg tcatttggat
 540
 catcttttac actgccatcc attatgactg atggtgtaca gctcccaagt gctccctatc
 600
 cagtccaaag gaccctcttg attacagcac aggaacttga tcgttgggga accccagccc
 660
 cttggaactt ggaagaccgc tgtttctctg accgcgaatc agtgtgttgg gcatcagtgt
 720
 tttctgcaag ggttgtgacc tgaaactttt taaaaaccac ccacctttgg ggaagcattt
 780
 ctgaatttat ccatcaccaa ccatttcttc ttggatacca tcaagtaaca gctattattt
 840
 gccaaagtga gctgtcattt aatttgatgc acctctggat tcagatgaaa cattaaattg
 900
 tcttctctga ttctccatcg ggtgtagagt ttttaaacta tcaatggcat ttcaagtctt
 960
 ctgaaacagc atggctgtat gtgcgtggtc catagcacag tacatgcagc atctaataag
 1020
 agtttccatt gtagaatgtt ttcacatact tgaataaatc aaatctttaa ttgagaaaaa
 1080
 aaaaaaaaaa aaaaaaaaaa aaa
 1103

<210> 2968

<211> 126

<212> PRT

<213> Homo sapiens

<400> 2968

Ala	Ala	Gly	Gly	Gly	Arg	Arg	Ser	Arg	Leu	Ser	Arg	Ser	Trp	Pro	Thr
1				5					10					15	
Gly	Pro	Ser	Lys	Ser	Pro	Ser	Gly	Val	Arg	Cys	Cys	Gly	Ala	Ala	Ala
			20					25					30		
Trp	Glu	Asp	Lys	Asp	Glu	Phe	Leu	Asp	Val	Ile	Tyr	Trp	Phe	Arg	Gln
		35					40				45				
Ile	Ile	Ala	Val	Val	Leu	Gly	Val	Ile	Trp	Gly	Val	Leu	Pro	Leu	Arg
	50					55					60				
Gly	Phe	Leu	Gly	Ile	Ala	Gly	Phe	Cys	Leu	Ile	Asn	Ala	Gly	Val	Leu

65		70		75		80									
Tyr	Leu	Tyr	Phe	Ser	Asn	Tyr	Leu	Gln	Ile	Asp	Glu	Glu	Glu	Tyr	Gly
				85					90					95	
Gly	Thr	Trp	Glu	Leu	Thr	Lys	Glu	Gly	Phe	Met	Thr	Ser	Phe	Ala	Xaa
			100					105					110		
Val	His	Gly	His	Leu	Asp	His	Leu	Leu	His	Cys	His	Pro	Leu		
		115					120					125			

<210> 2969
 <211> 667
 <212> DNA
 <213> Homo sapiens

<400> 2969
 atcagcgct taggggacca gagcaagaag gtggtgcacg ttccctacag ggactccaag
 60
 ctactcggc tcctccagga ttcgctgggg ggcaacagcc agaccatcat gatcgctgg
 120
 gggagccctt caaaccgaga tttcatggag accctcaaca cactcaaata tgccaatcgg
 180
 gcccgcaaca tcaagaacaa ggtggtagtg aaccaagaca agaccgccag caaatcaatg
 240
 cactgcgggc tgagattgct cggctgcaga tggagctgat ggagtnataa ggcgggcaag
 300
 cgagtgatag gagaggatgg cgctgagggc tatagtgatc tgttccgaga gaatgccatg
 360
 ctacagaagg agaatggggc cctgcggctg cgggtgaaag ccatgcagga ggccatcgat
 420
 gccatcaaca accgcgtcac ccagctcatg agccaggagg ccaacctgct gctagccaag
 480
 gccggcgatg gcaatgaggc cattggtgcg ctgatccaga actacatccg ggagatcgag
 540
 gagctacgga ctaagcttct agagagtga gccatgaacg agtccctgcg ccgcagcctc
 600
 tcacgggcct cggetaggag cccctactcc ctgggtgctt ctccagccgc cccggccttc
 660
 gggggca
 667

<210> 2970
 <211> 92
 <212> PRT
 <213> Homo sapiens

<400> 2970
 Ile Ser Ala Leu Gly Asp Gln Ser Lys Lys Val Val His Val Pro Tyr
 1 5 10 15
 Arg Asp Ser Lys Leu Thr Arg Leu Leu Gln Asp Ser Leu Gly Gly Asn
 20 25 30
 Ser Gln Thr Ile Met Ile Ala Trp Gly Ser Pro Ser Asn Arg Asp Phe
 35 40 45
 Met Glu Thr Leu Asn Thr Leu Lys Tyr Ala Asn Arg Ala Arg Asn Ile
 50 55 60
 Lys Asn Lys Val Val Val Asn Gln Asp Lys Thr Ala Ser Lys Ser Met

80

<400> 2971
nccccatttcc agctccggag cgggaggctg cgccccgctc gtcgaggagc tgcgctcacc
60
tcagggggcgg gcccccgccct gcgttcgcgg cgccagcaga agactgattt ttggaaatat
120
gtatttgga gacagtcacg tcctattgaa taccttgctg tggtgctgcc atcgaaaaat
180
ctgggttacac tctggggagg actgctacca ctgcagaact gaaccacttc ggccgtgaga
240
tgagtgtccg gcctgagcag gcacaccatg aatagataca caacaatcag gcagctcggg
300
gatggaacct acggttccgt cctgctggga agaagcattg agtctgggga gctgatcgct
360
attaaaaaaa tgaaaagaaa attttattcc tgggaggaat gcatgaacct tcgggaggtt
420
aagtctttaa agaagctcaa ccatgccaat gtagtcaaat taaaagaagt tatcagggaa
480
aatgatcatc tttattttat cttcgagtac atgaaggaaa atctttacca gctcattaaa
540
gagagaaata agttgtttcc tgagtctgct ataaggaata tcatgtatca gatattacaa
600
ggactcgcat ttattcacaa acacgggcttc tttcatcgag acttaaagcc tgagaacctc
660
ctctgcatgg gaccagaact tgtgaaaatt gcagactttg gtttggcccg agaaatacga
720
tcaaaacctc catatacaga ttatgtatct accagatggg acagggctcc agaagtactc
780
ctgaggtcta ccaactacag ctccccatt gacgtctggg cgggtgggctg catcatggca
840
gaagtttaca ccctcaggcc actcttcctt ggagccagtg aaattgacac aatattcaaa
900
atttgccaag tgctggggac accaaaaaag actgactggc ctgaaggcta tcaactttca
960
agtgcaatga acttccgttg gccacagtgt gtaccaata acttaaagac cttgattccc
1020
aatgctagca gtgaagcagt ccagctcctg agagacatgc ttcagtggga tccaagaaa
1080
cgaccaacag ctagtcaggc acttcgatat cttacttcc aagttggaca ccactaggc
1140
agcaccacac aaaaccttca ggattcagaa aaaccacaga aaggcatcct ggaaaaggca
1200
ggccacctc cttatattaa gccagtcca cctgccagc caccagccaa gccacacaca
1260
cgaatttctt cacgacagca tcaagccagc cagccccctc tgcattctac gtaccctac
1320

aaagcagagg tctccaggac agatcaccca agccatctcc aggaggacaa gccaaagccc
1380
ttgcttttcc catccctcca caacaagcat ccacagtcga aaatcacagc tggcctggag
1440
cacaaaaatg gtgagataaa gccaaagagt aggagaagggt ggggtcttat ttcagggtca
1500
acaaaggatt cagatgattg ggctgacttg gatgacttgg atttcagtcc atccctcagc
1560
aggattgacc tgaaaaacaa gaaaagacag agtgatgaca ctctctgcag gtttgagagt
1620
gttttggacc tgaagccctc tgagcctgtg ggcacaggaa acagtgcccc caccagacg
1680
tcatatcagc ggcgagacac gccaccctg agatctgcag ccaagcagca ctatttgaag
1740
cactctcgat acttgccctgg gatcagtata agaaatggca tactctcgaa tccaggcaag
1800
gaatttatcc cacctaattc atgggtctagt tctggcttgt ctggaaaatc ttcaggga
1860
atgtcagtaa tcagcaaagt aaattcagtt ggttccagct ctacaagttc tagtggactg
1920
actggaaact atgtcccttc ctttctgaaa aaagaaatcg gttctgctat gcagagggt
1980
cacctagcac ctattccaga cccttccctt gggtattcct ccctgaaggc catgagacct
2040
catcctgggc gaccattctt ccacaccag cctagaagca ctctggggtt gataccacgg
2100
cctccagccg cccagccagt gcatggccgg acagactggg cttccaagta cgcctctcgg
2160
cgatgactgt ctgccttggg gatgaatctc ttcctaggga gaagcaggat actttccctc
2220
agctgactgg tgttctacct gcaagatgtg cagagggcat aaaagcaaat caacacttta
2280
tagttattct tctgaactaa gacatgtcaa tattcttttt taaagttttt ttttaaaata
2340
ttgatttgaa tgcagtaggc ttttttgtat aaaattattt tattctaaaa ctgggtccca
2400
ttattttctt aaacaacagc attttgtata tatggattat gttttagcat tttatacagt
2460
caactttgta atgaactttt taaaaattaa ttgattttcc tttgggggtc cagataatat
2520
tttctacaga ttttgaaaaa tgtaataata ttaatgcagt attgcaacag ggggtgaatt
2580
taaggctatg tgatagaggg ttatttactc agtgtgtgca gatatttatg aagtggtgaa
2640
atttcaagtg tggctcacta ggtacttcag gccttcttgg actgttggtta gaaaagtgat
2700
cctctgcttt tcttagtagg tcattgggtt gatttttggg taccactctg ctgttctaaa
2760
aggactatta tattatataa ttcactttgt tttacttttg tccccagat gaaagaactc
2820
taagtaaata cattttaaaa aatttttctg acacccttta atgtggttgc agatctcaga
2880
tgaaaccaag cttaattata ctatgccatt atattctaatt ttattccatt tttgaaatca
2940

agttgtatgt gtaccaataa aagagatttc tgcttcaaaa ggctctcaac atgaaggtta
3000
acacagtcaa tcaaacttac attcctgcc aagatgcatgg ccaaaaaact aagtatcaaa
3060
gcagcagaag gtttttgatt atagtaactg agatggaatt ttgtgcctag ctcagttctc
3120
cagatctggc taggagcagt caatgactaa tgttctgtcc tagccaaatt ctcaggacaa
3180
tttggggagc agaaagagtt atggcagagg ttccactcat ctacaaagtc acagtcacat
3240
gccacatttg atctcctaac cctgggtgtag tttctttcaa gaggagaac tttatttgg
3300
gggcagaggc tgttccattg agaggaatgt ttacagcagt ttcaaaaatg acaaagtcag
3360
tttggagaca gaaaaagaca aaagggtccag tctcatccat ctctatatgg tacatttggc
3420
tcacttatgg ttgccttaaa ggcaagaggg aagggtcacca tcagtgaacg caatgcaatc
3480
tcaacagtgt attgattcat attctcctag ggctcaaaact actctctatt ggttccagga
3540
taatgacaaa ttgaaccata tgtaagtaat cttttatttt ttattttttt tttgagacag
3600
agtctcactc tgtcaccag gctggagtgc agtggcgcgga tcttagctct ctgcaacctc
3660
tgctcccag gttcaagcct cctgagtaac tgggactaca ggcgcccgc accacgccc
3720
gctaattttt tgtattttta gtagagacgg ggtttcactg tgtagccag gacggcctcg
3780
atctcctgac ctctgtatcc accctcctcc acctcccaa gtactgggat tacaggcatg
3840
agccactgca cccagccaag tgatcatttt tatagggttaa aatgatagggt gaaatgaata
3900
tagacacttt catatgggtc aacctaatga cttgggtaaat tattgccttg gtgtattaat
3960
aatatgttgc attctgaaca aataaccatg gcttccaaag ggccttaacc taaaatcgga
4020
gagtaattta tgctttggag aatttggctc aaatatatac ttgaccaagc accatgatcc
4080
ctaggggcat gagaaaagca cataatggat gtggatgtga taggtggtct tttcctgtta
4140
acaagctggc agcaaagctt cagaaaatat atatgcaagc acaacttgaa gctgaattca
4200
tttctgtatt atattctcaa ctctgtatct aaagcatcag aacatgtgtt ttcagagatg
4260
agtcctttac tataagggtta atatttattt tcattttctg tattatatat gaaaagtaaa
4320
ttaatgtgaa acctggccca gcttgctgga aagcagggtt taaattgtaa atattcctta
4380
gaggagcaaa tggattgttt aataccatag tctcagtaat ctagcttata taaggtcatt
4440
acatttttta actgaaaaac ctagttacct gattattgca cattataaaa ttgtttttct
4500
aatactttat agggcccaac ttcagaaaat acttcgcttt tttcttttta tgctttcgtt
4560

tgtttaccag caagcaactt ccctgggggaa gccaaacaca tattcataaa aaaaatcaag
4620
tagctgatgt gcagttgaga aaactagagg actgaaaaaa caaatTTTaa ctagcaaagt
4680
ctgtgaatta ctcttcctcc ccttctctga aatgggtaaa ggacaaattg tgtaaaaaaa
4740
cctatgcact atagaaggga atagtaacca tttcttttgt ctctctgttt ctgttctgac
4800
tgagaacctg cagccatttc ttgttacatg aaaacaaaat gctacttggt acctctatTT
4860
tttgttacta tacaattatg aaatgtaatg taagacacca acagaaatga tatacctgta
4920
actgtaccta tcaggactat acctcattta cagtcagaaa gcttactggg atgtcaggaa
4980
atgatacagg gttgggtctc atttcgtgcc gaaatgagac agaaattcag tgacgaaggT
5040
gcgttgtagg ggtattgatg tgccccaggt agtgccagca gagtagggaa aactgcattt
5100
gcataaaaac tactcttgac atgattgttc attttacaaa aaaattccat taattaccaa
5160
gccctcacc agcccatgtg tgataggatt tatgtaggaa gaaacttgat tttcaaataa
5220
ttttttaaat gtatctcttg cctaaaggac tatatacatc taataaagta aactgtgtc
5280
atcttctgga gttatcaaaa attgtataca atcaagacaa cacaagaatt attttatttt
5340
tgagtgcaaa tacaggTact gttggagttg atgggcacca tgctttctca tgaagtagca
5400
tttccctacc atcaagccat tgTTTTgtgc cattcaggag aggaaaaaaa ggaatttatg
5460
ctgtacattt cagttcagtg tatgaccaa agcaatatgt ttataagaag atgtttgaca
5520
tactaattat tttatatcat ttaaaccata ctgtagcaac ataatatatg gagctaattt
5580
gtagaattat ttttacgatt tccaaacaaa tgtactgtac tgttatataa tttattgtga
5640
ggaccttctc atggaagcca ttaggaaaac aaactagagg taaatatcac attaattctgT
5700
attatcaatt tctcatagac actgtgctaa tgtgaatttt aaatgacctg catcaagtct
5760
tctgatctca gataactcag tacagatagc aattagtcag ctgatttgat tacaatggag
5820
taaccgacaa tatatttatt tataaagcac atattcataa taacgagaag aattcagaaa
5880
accatttaag caagacctt ctgaaataaa aaatgttgct ttttaaatag tttgtcctaa
5940
ggtgttttaa acatgtcaac cttatgtaag gaaaaatttc ctggtccaaa taaagttgaa
6000
gtttaagaaa aattg
6015

<210> 2972

<211> 632

<212> PRT

<213> Homo sapiens

<400> 2972

```

Met Asn Arg Tyr Thr Thr Ile Arg Gln Leu Gly Asp Gly Thr Tyr Gly
 1          5          10          15
Ser Val Leu Leu Gly Arg Ser Ile Glu Ser Gly Glu Leu Ile Ala Ile
          20          25          30
Lys Lys Met Lys Arg Lys Phe Tyr Ser Trp Glu Glu Cys Met Asn Leu
          35          40          45
Arg Glu Val Lys Ser Leu Lys Lys Leu Asn His Ala Asn Val Val Lys
          50          55          60
Leu Lys Glu Val Ile Arg Glu Asn Asp His Leu Tyr Phe Ile Phe Glu
65          70          75          80
Tyr Met Lys Glu Asn Leu Tyr Gln Leu Ile Lys Glu Arg Asn Lys Leu
          85          90          95
Phe Pro Glu Ser Ala Ile Arg Asn Ile Met Tyr Gln Ile Leu Gln Gly
          100          105          110
Leu Ala Phe Ile His Lys His Gly Phe Phe His Arg Asp Leu Lys Pro
          115          120          125
Glu Asn Leu Leu Cys Met Gly Pro Glu Leu Val Lys Ile Ala Asp Phe
          130          135          140
Gly Leu Ala Arg Glu Ile Arg Ser Lys Pro Pro Tyr Thr Asp Tyr Val
145          150          155          160
Ser Thr Arg Trp Tyr Arg Ala Pro Glu Val Leu Leu Arg Ser Thr Asn
          165          170          175
Tyr Ser Ser Pro Ile Asp Val Trp Ala Val Gly Cys Ile Met Ala Glu
          180          185          190
Val Tyr Thr Leu Arg Pro Leu Phe Pro Gly Ala Ser Glu Ile Asp Thr
          195          200          205
Ile Phe Lys Ile Cys Gln Val Leu Gly Thr Pro Lys Lys Thr Asp Trp
          210          215          220
Pro Glu Gly Tyr Gln Leu Ser Ser Ala Met Asn Phe Arg Trp Pro Gln
225          230          235          240
Cys Val Pro Asn Asn Leu Lys Thr Leu Ile Pro Asn Ala Ser Ser Glu
          245          250          255
Ala Val Gln Leu Leu Arg Asp Met Leu Gln Trp Asp Pro Lys Lys Arg
          260          265          270
Pro Thr Ala Ser Gln Ala Leu Arg Tyr Pro Tyr Phe Gln Val Gly His
          275          280          285
Pro Leu Gly Ser Thr Thr Gln Asn Leu Gln Asp Ser Glu Lys Pro Gln
          290          295          300
Lys Gly Ile Leu Glu Lys Ala Gly Pro Pro Pro Tyr Ile Lys Pro Val
305          310          315          320
Pro Pro Ala Gln Pro Pro Ala Lys Pro His Thr Arg Ile Ser Ser Arg
          325          330          335
Gln His Gln Ala Ser Gln Pro Pro Leu His Leu Thr Tyr Pro Tyr Lys
          340          345          350
Ala Glu Val Ser Arg Thr Asp His Pro Ser His Leu Gln Glu Asp Lys
          355          360          365
Pro Ser Pro Leu Leu Phe Pro Ser Leu His Asn Lys His Pro Gln Ser
          370          375          380
Lys Ile Thr Ala Gly Leu Glu His Lys Asn Gly Glu Ile Lys Pro Lys
385          390          395          400
Ser Arg Arg Arg Trp Gly Leu Ile Ser Arg Ser Thr Lys Asp Ser Asp

```

```
<210> 2973
<211> 858
<212> DNA
<213> Homo sapiens
```

```
<400> 2973
ggctactttt ggttcatggg aagaaccgac gatgtgatca attcttcaag ctaccgggatc
60
gggcctgttg aagtggaaag tgccctggca gagcatcctg ctgtcctgga gtcggctgtg
120
gtcagcagcc cagaccccat caggggagag gtggtaaagg catttatagt ccttactcca
180
gcctactcct ctcatgaccc agaggcacta acgcgggaac tccaggagca tgtgaaaagg
240
gtgactgctc catacaaaac cccaggaag gtggcctttg tttcagaact gccaaagacg
300
gtttctggaa agatccaaag gagtaaattg cgaagtcagg agtgggggaa atgaggtgca
360
ccccaggaag gccctgtaga cctccgaaga ctccacaaga aactaatgga tcactggtca
420
gtcccatgg ggagcatcat ctcttcgacc ctaaagatgt caaaggtgtg cagcttccaa
480
acggcatccc caggatcact gggcaatgct ggaaagagca aaagaatatc attggccctg
540
```

atcacataga tgctgcgccg cctagcaaat gcttggtggg tcgacttctc cctctgtctg
 600
 ggggcaggct cagcatctgc ccactggtct cactaagagc ttccagattt ccctccatag
 660
 gacagggttac catagacttg gggcacttgt ggggtactcat tttctgccag tgggaatgta
 720
 aaggcttcat cctttgtatg taaccatttg gcaaaagtat gcaggaacat aaaataaaat
 780
 atccttttagc tcaaaaattc tatcttcggg agtcaccaca aaagaaaaaa atcaaaatgc
 840
 agaaaatgtg gagtgcac
 858

<210> 2974
 <211> 117
 <212> PRT
 <213> Homo sapiens

<400> 2974
 Gly Tyr Phe Trp Phe Met Gly Arg Thr Asp Asp Val Ile Asn Ser Ser
 1 5 10 15
 Ser Tyr Arg Ile Gly Pro Val Glu Val Glu Ser Ala Leu Ala Glu His
 20 25 30
 Pro Ala Val Leu Glu Ser Ala Val Val Ser Ser Pro Asp Pro Ile Arg
 35 40 45
 Gly Glu Val Val Lys Ala Phe Ile Val Leu Thr Pro Ala Tyr Ser Ser
 50 55 60
 His Asp Pro Glu Ala Leu Thr Arg Glu Leu Gln Glu His Val Lys Arg
 65 70 75 80
 Val Thr Ala Pro Tyr Lys Thr Pro Arg Lys Val Ala Phe Val Ser Glu
 85 90 95
 Leu Pro Lys Thr Val Ser Gly Lys Ile Gln Arg Ser Lys Leu Arg Ser
 100 105 110
 Gln Glu Trp Gly Lys
 115

<210> 2975
 <211> 1425
 <212> DNA
 <213> Homo sapiens

<400> 2975
 ccctcaacta ccgggaccca ggagttgaag ccgggggttg agggctctct ggggggtggg
 60
 gacacaatgt atacggtcaa tggcgtccac ccactgaccc tgcgctggga agagacccgc
 120
 acaccagaat ccagccaga tactccgcct ggcacccctc tgggtgtccca agatgagaag
 180
 agagatgctg agctgccgaa gaagcgtatg gggaagtcaa accccggctg ggagaacttg
 240
 gagaagttgc tagtggtcac cgcagctggg gtgaaaccgg ggnncaaggt ggctggcttt
 300
 gatctggacg ggacgtcat caccacacgc tctgggaagg tctttccac tggccccagt
 360

gactggagga tcttgtaccc agagattccc cgtaagctcc gagagctgga agccgagggc
 420
 tacaagctgg tgatcttcac caaccagatg agcatcgggc gcgggaagct gccagccgag
 480
 gagttcaagg ccaaggtgga ggctgtggtg gagaagctgg gggccccctt ccaggtgctg
 540
 gtggccacgc acgcaggctt gtaccggaag ccggtgacgg gcatgtggga ccatctgcag
 600
 gagcaggcca acgacggcac gcccataatcc atcggggaca gcatctttgt gggagacgca
 660
 gccggacgcc cggccaactg ggccccgggg cggaagaaga aagacttctc ctgcgccgat
 720
 cgctgtttg cctcaacct tggcctgccc ttcgccacgc ctgaggagtt ctttctcaag
 780
 tggccagcag ccggtctcga gctcccagcc tttgatccga ggactgtctc ccgctcaggg
 840
 cctctctgcc tccccgagtc cagggccctc ctgagcgcca gcccgagggt ggttgtcgca
 900
 gtgggattcc ctggggccgg gaagtccacc tttctcaaga agcacctcgt gtcggccgga
 960
 tatgtccacg tgacagggaac acgctaggct cctggcagcg ctgtgtgacc acgtgtgaga
 1020
 cagccctgaa gcaagggaaa cgggtcgcca tcgacaacac aaaccagac gccgcgagcc
 1080
 gcgccaggta cgtccagtgt gcccgagccg cgggcgtccc ctgccgctgc ttcctcttca
 1140
 ccgccactct ggagcaggcg cgccacaaca accggtttcg agagatgacg gactcctctc
 1200
 atatccccgt gtcagacatg gtcatgtatg gctacaggaa gcagttcgag gcccacacgc
 1260
 tgggtgaagg cttctctgcc atcctggaga tcccgttccg gctatgggtg gagccgaggg
 1320
 tggggcgggt gtactgccag ttctccgagg gctgagcccc cccagctccc ctccacaata
 1380
 aacgctgttt ctccttgaaa aaaaaaaaaa aaaaaaaaaa aaaaa
 1425

<210> 2976

<211> 328

<212> PRT

<213> Homo sapiens

<400> 2976

Pro	Ser	Thr	Thr	Gly	Thr	Gln	Glu	Leu	Lys	Pro	Gly	Leu	Glu	Gly	Ser
1				5					10					15	
Leu	Gly	Val	Gly	Asp	Thr	Met	Tyr	Thr	Val	Asn	Gly	Val	His	Pro	Leu
			20					25					30		
Thr	Leu	Arg	Trp	Glu	Glu	Thr	Arg	Thr	Pro	Glu	Ser	Gln	Pro	Asp	Thr
		35				40					45				
Pro	Pro	Gly	Thr	Pro	Leu	Val	Ser	Gln	Asp	Glu	Lys	Arg	Asp	Ala	Glu
	50					55					60				
Leu	Pro	Lys	Lys	Arg	Met	Gly	Lys	Ser	Asn	Pro	Gly	Trp	Glu	Asn	Leu
65				70					75					80	
Glu	Lys	Leu	Leu	Val	Phe	Thr	Ala	Ala	Gly	Val	Lys	Pro	Gly	Xaa	Lys

				85					90					95	
Val	Ala	Gly	Phe	Asp	Leu	Asp	Gly	Thr	Leu	Ile	Thr	Thr	Arg	Ser	Gly
			100						105					110	
Lys	Val	Phe	Pro	Thr	Gly	Pro	Ser	Asp	Trp	Arg	Ile	Leu	Tyr	Pro	Glu
		115					120					125			
Ile	Pro	Arg	Lys	Leu	Arg	Glu	Leu	Glu	Ala	Glu	Gly	Tyr	Lys	Leu	Val
	130					135					140				
Ile	Phe	Thr	Asn	Gln	Met	Ser	Ile	Gly	Arg	Gly	Lys	Leu	Pro	Ala	Glu
145					150				155					160	
Glu	Phe	Lys	Ala	Lys	Val	Glu	Ala	Val	Val	Glu	Lys	Leu	Gly	Val	Pro
			165						170					175	
Phe	Gln	Val	Leu	Val	Ala	Thr	His	Ala	Gly	Leu	Tyr	Arg	Lys	Pro	Val
		180						185					190		
Thr	Gly	Met	Trp	Asp	His	Leu	Gln	Glu	Gln	Ala	Asn	Asp	Gly	Thr	Pro
	195						200					205			
Ile	Ser	Ile	Gly	Asp	Ser	Ile	Phe	Val	Gly	Asp	Ala	Ala	Gly	Arg	Pro
	210					215					220				
Ala	Asn	Trp	Ala	Pro	Gly	Arg	Lys	Lys	Lys	Asp	Phe	Ser	Cys	Ala	Asp
225					230					235				240	
Arg	Leu	Phe	Ala	Leu	Asn	Leu	Gly	Leu	Pro	Phe	Ala	Thr	Pro	Glu	Glu
			245						250					255	
Phe	Phe	Leu	Lys	Trp	Pro	Ala	Ala	Gly	Phe	Glu	Leu	Pro	Ala	Phe	Asp
		260						265					270		
Pro	Arg	Thr	Val	Ser	Arg	Ser	Gly	Pro	Leu	Cys	Leu	Pro	Glu	Ser	Arg
	275						280					285			
Ala	Leu	Leu	Ser	Ala	Ser	Pro	Glu	Val	Val	Val	Ala	Val	Gly	Phe	Pro
	290					295					300				
Gly	Ala	Gly	Lys	Ser	Thr	Phe	Leu	Lys	Lys	His	Leu	Val	Ser	Ala	Gly
305				310					315					320	
Tyr	Val	His	Val	Thr	Gly	Thr	Arg								
				325											

<210> 2977

<211> 1420

<212> DNA

<213> Homo sapiens

<400> 2977

nngtcgaata tccatgcaga gtaccgcatg gtagtagggg gtgcccaggc aggggacgca
 60
 ggcacctacc actgcactgc cgctgagtgg attcaggatc ctgatggcag ctgggcccag
 120
 attgcagaga aaagggccgt cctggcccac gtggatgtgc agacgctgtc cagccagctg
 180
 gcagtgcag tggggcctgg tgaacgtcgg atcggccag gggagccctt ggaactgctg
 240
 tgcaatgtgt caggggcact tccccagca ggccgtcatg ctgcatactc tgtaggttgg
 300
 gagatggcac ctgcgggggc acctgggccc ggccgcctgg tagcccagct ggacacagag
 360
 ggtgtgggca gcctgnnggc cctggctatg agggccgacn acattgccat ggagaaggtg
 420
 gcatccagaa cataccggct acggctagag gctgccaggc ctggtgatgc gggcacctac
 480

cgctgcctcg ccaaagccta tgttcgaggg tctgggaccc ggcttcgtga agcagccagt
 540
 gcccggtccc ggccctctccc tgtacatgtg cgggaggaag gtgtggtgct ggaggctgtg
 600
 gcatggctag caggaggcac agtgtaccgc ggggagactg cctccctgct gtgcaacatc
 660
 tctgtgcggg gtggccccc aggactgcgg ctggccgcca gctggtgggt ggagcgacca
 720
 gaggacggag agctcagctc tgtccctgcc cagctggtgg gtggcgtagg ccaggatggt
 780
 gtggcagagc tgggagtccg gcctggagga ggccctgtca gcgtagagct ggtggggccc
 840
 cgaagccatc ggctgagact acacagcttg gggcccagg atgaaggcgt gtaccactgt
 900
 gccccagcg cctgggtgca gcatgccgac tacagctggt accaggcggg cagtgccgcg
 960
 tcagggcctg ttacagteta cccctacatg catgccctgg acaccctatt tgtgcctctg
 1020
 ctggtgggta caggggtggc cctagtcaact ggtgccactg tccttggtag catcacttgc
 1080
 tgcttcatga agaggcttcg aaaacgggtga tcccttactc ccagcccac accgggcacc
 1140
 cttttcaggt cttgcaggtg tcgactgtct tccggcccag ctccaagccc tcctctggtt
 1200
 gcctggacac cctctccctc tgtccactct tcctttaatt tatttgacct cccactaccc
 1260
 agaatgggag acgtgcctcc ccttccccac tccttccctc ccaagccctt cctctggtcc
 1320
 ttctgttctt gatctcttag ggatccctata gggaggccat ttctgtcctt ggaattagtt
 1380
 tttctaaaat gtgaataaac ttgttttata aaaagcaaaa
 1420

<210> 2978

<211> 369

<212> PRT

<213> Homo sapiens

<400> 2978

Xaa	Ser	Asn	Ile	His	Ala	Glu	Tyr	Arg	Met	Val	Val	Gly	Gly	Ala	Gln
1				5					10					15	
Ala	Gly	Asp	Ala	Gly	Thr	Tyr	His	Cys	Thr	Ala	Ala	Glu	Trp	Ile	Gln
		20						25					30		
Asp	Pro	Asp	Gly	Ser	Trp	Ala	Gln	Ile	Ala	Glu	Lys	Arg	Ala	Val	Leu
		35					40					45			
Ala	His	Val	Asp	Val	Gln	Thr	Leu	Ser	Ser	Gln	Leu	Ala	Val	Thr	Val
		50				55					60				
Gly	Pro	Gly	Glu	Arg	Arg	Ile	Gly	Pro	Gly	Glu	Pro	Leu	Glu	Leu	Leu
65				70						75				80	
Cys	Asn	Val	Ser	Gly	Ala	Leu	Pro	Pro	Ala	Gly	Arg	His	Ala	Ala	Tyr
				85						90				95	
Ser	Val	Gly	Trp	Glu	Met	Ala	Pro	Ala	Gly	Ala	Pro	Gly	Pro	Gly	Arg
			100					105					110		
Leu	Val	Ala	Gln	Leu	Asp	Thr	Glu	Gly	Val	Gly	Ser	Leu	Xaa	Ala	Leu

115 120 125
 Ala Met Arg Ala Asp Xaa Ile Ala Met Glu Lys Val Ala Ser Arg Thr
 130 135 140
 Tyr Arg Leu Arg Leu Glu Ala Ala Arg Pro Gly Asp Ala Gly Thr Tyr
 145 150 155 160
 Arg Cys Leu Ala Lys Ala Tyr Val Arg Gly Ser Gly Thr Arg Leu Arg
 165 170 175
 Glu Ala Ala Ser Ala Arg Ser Arg Pro Leu Pro Val His Val Arg Glu
 180 185 190
 Glu Gly Val Val Leu Glu Ala Val Ala Trp Leu Ala Gly Gly Thr Val
 195 200 205
 Tyr Arg Gly Glu Thr Ala Ser Leu Leu Cys Asn Ile Ser Val Arg Gly
 210 215 220
 Gly Pro Pro Gly Leu Arg Leu Ala Ala Ser Trp Trp Val Glu Arg Pro
 225 230 235 240
 Glu Asp Gly Glu Leu Ser Ser Val Pro Ala Gln Leu Val Gly Gly Val
 245 250 255
 Gly Gln Asp Gly Val Ala Glu Leu Gly Val Arg Pro Gly Gly Gly Pro
 260 265 270
 Val Ser Val Glu Leu Val Gly Pro Arg Ser His Arg Leu Arg Leu His
 275 280 285
 Ser Leu Gly Pro Glu Asp Glu Gly Val Tyr His Cys Ala Pro Ser Ala
 290 295 300
 Trp Val Gln His Ala Asp Tyr Ser Trp Tyr Gln Ala Gly Ser Ala Arg
 305 310 315 320
 Ser Gly Pro Val Thr Val Tyr Pro Tyr Met His Ala Leu Asp Thr Leu
 325 330 335
 Phe Val Pro Leu Leu Val Gly Thr Gly Val Ala Leu Val Thr Gly Ala
 340 345 350
 Thr Val Leu Gly Thr Ile Thr Cys Cys Phe Met Lys Arg Leu Arg Lys
 355 360 365
 Arg

<210> 2979
 <211> 2191
 <212> DNA
 <213> Homo sapiens

<400> 2979
 tttttttttt tttttttttt tttttttttt tttttttttt ccttggtcagg gtttatttca
 60
 tcagctaaca ttcattctcg acctagacaa aaacaattag atgattatga cttgcttttc
 120
 catcatcaac tcattttttt gtatgaataa ccaaaaaatt tcttcaacac ttttttttaa
 180
 gaagaagcta taaataaata aagcttttaa caatcctggg ttcaagttaa acagttccag
 240
 ttcccgaaaa gttcacagcc ttgttttgtg ggcagttctg ctgttcctgg cttccccttc
 300
 caggagggga cgtttgcagg tctgggggtc ctggtgacta agctgttagc tccactccct
 360
 gcctgttttc gtcttcacag ccctgggagg gccccggtgg acagagtcct tacaatttag
 420

gagatgctgc tggcaaagga actggtgacc caaagcaggt ggctgaatg ggaagtgcc
480
ggctggacac ttgggggctg agggcactgc cagctgccgc cgctctgga cacctcagcc
540
cggcgctggc ccgagaggag actgctttcc aaatgcagcg aagagactga gacaagaccc
600
gtgcttccgt gtgagttggg atgcggggca taagttaaca catattccaa tatgtacaaa
660
acaacctgcg ctcaggcccc cgacccagg aagcccatgg tgaaggtag gtcacctga
720
gccaggcctc tggctgggtg tccacctcct gccgggaagc caagggtgcc cacgtggctt
780
gtgcaagacc tcacaatccc ctgaacgtgt tcctcctcct ccaaggagt caccacccc
840
catgttgagt gtccgagcag attcccattg accctgacct ccctttgaaa gaaccacacc
900
actaaatccc cttggcactc acttccttag tgtgatgcat ccaccagggt aggtggcct
960
gcgcggcgct ggcacgctgt ccacctgcc ctgttgacca tcctgtcctt ggacccaaa
1020
gtaaaatggg gccagtgtag gagacctgag ggtggggccc ttatgccaga cctccagggtg
1080
tagcgacctc acctgacccc agcttcggct tcctgtgctg cagaaggcgc ttgctcccaa
1140
gcccgtggtg acccacgtct ccaccccatg gtgtggcaac tgtggtggct gagtggaagc
1200
tggggcagga gagaggaccc ccaccaaccc cagccagggtg gcctgcagag cccactgccc
1260
tacctctgag tcagcctgcg gcctgagcac accaatctac tctctggggg atccagggtg
1320
cctgtgtggg ccctcctaga gacaccagct tggcctccta gggcataagg aatggggaca
1380
gggcacaggg cacgtgctta caacggatat gcaacatggc ttttggtagg gccattgcag
1440
ccagtgggga aacctgcgcg gctgctggga acagagcatg gccagccttt tgccaggggg
1500
tggggagcat ggggaaatgc aaggagagcc aggggtggga gggctgagt tctgttgtca
1560
gggaggccac ctacagctgt ttgccaagg ctagttgaga atctgaaagc tcgagtccca
1620
gttcctggcc atacagagcc actgtggtcc gagggtagcg ctctgggca ggggctatgg
1680
tcccatgctc cagccgatgg aagcctgatg aacttaatcc gtacgctggt gggagcagt
1740
gtatttgagc tcttgagtat gtgtttcggg gatggggctg gggcagcctg ctagcaaate
1800
ccagtgggtc agaaaggaga acagaggcag gggagccctc ggtccccagc ccttcagtc
1860
tgagccaggc ctgcctggat ggtcacctcc caagggccag ccgcggactc acgcacaagt
1920
ggcagcatcc ctggccaaag cctccccact cctgggctgc cagttggccc gaggaaggcc
1980
ggcaatgcag ctcgggccta ctacccaaac ccctggcaaa aggtggcca tgctctgttc
2040

ccagcagccg cgcaggtttc cccactggct gcaatggccc taccaaaagc catgttgcac
 2100
 atccgttgta agcacgtgcc ctgtgccttg tccccattcc ttatgcccta ggaggccaag
 2160
 ctggtgtctc taggagggcc cacacaggca c
 2191

<210> 2980
 <211> 140
 <212> PRT
 <213> Homo sapiens

<400> 2980
 Met Gly Thr Gly His Arg Ala Arg Ala Tyr Asn Gly Tyr Ala Thr Trp
 1 5 10 15
 Leu Leu Val Gly Pro Leu Gln Pro Val Gly Lys Pro Ala Arg Leu Leu
 20 25 30
 Gly Thr Glu His Gly Gln Pro Phe Ala Arg Gly Trp Gly Ala Trp Gly
 35 40 45
 Asn Ala Arg Arg Ala Arg Val Gly Arg Ala Glu Cys Leu Leu Ser Gly
 50 55 60
 Arg Pro Pro Thr Ala Val Leu Pro Arg Leu Val Glu Asn Leu Lys Ala
 65 70 75 80
 Arg Val Pro Val Pro Gly His Thr Glu Pro Leu Trp Ser Glu Gly Thr
 85 90 95
 Ala Pro Gly Gln Gly Leu Trp Ser His Ala Pro Ala Asp Gly Ser Leu
 100 105 110
 Met Asn Leu Ile Arg Thr Leu Val Gly Ala Val Val Phe Glu Leu Leu
 115 120 125
 Ser Met Cys Phe Gly Asp Gly Ala Gly Ala Ala Cys
 130 135 140

<210> 2981
 <211> 617
 <212> DNA
 <213> Homo sapiens

<400> 2981
 nngaattccc cttcacggac ctgaagccta aggatgctgg gaggtacttt tgtgcctaca
 60
 agacaacagc ctcccatgag tggtcagaaa gcagtgaaca cttgcagctg gtggtcacag
 120
 ataaacacga tgaacttgaa gctccctcaa tgaaaacaga caccagaacc atctttgtcg
 180
 ccattcttcag ctgcatctcc atccttctcc tcttctctc agtcttcatc atctacagat
 240
 gcangccagc acagttcatc atctgaggaa tccaccaaga gaaccagcca ttccaaactt
 300
 ccggagcagg aggctgccga ggcagattta tccaatatgg aaagggtatc tctctcgacg
 360
 gcagaccccc aaggagtgc ctatgctgag ctaagcacca gcgccctgtc tgaggcagct
 420
 tcagacacca cccaggagcc cccaggatct catgaatatg cggcactgaa agtgtagcaa
 480

gaagacagcc ctggccacta aaagaggggg gatcgtgctg gccaaaggta tcggaaatct
 540
 ggagatgcag atactgtgtt tccttgctct tcgtccatat caataaaatt aagttttctcg
 600
 tcttaaaaaa aaaaaaa
 617

<210> 2982

<211> 107

<212> PRT

<213> Homo sapiens

<400> 2982

Lys	Gln	Thr	Pro	Glu	Pro	Ser	Leu	Ser	Pro	Ser	Ser	Ala	Ala	Ser	Pro
1				5					10					15	
Ser	Phe	Ser	Ser	Ser	Ser	Gln	Ser	Ser	Ser	Ser	Thr	Asp	Ala	Xaa	Gln
			20					25					30		
His	Ser	Ser	Ser	Ser	Glu	Glu	Ser	Thr	Lys	Arg	Thr	Ser	His	Ser	Lys
			35				40					45			
Leu	Pro	Glu	Gln	Glu	Ala	Ala	Glu	Ala	Asp	Leu	Ser	Asn	Met	Glu	Arg
			50				55				60				
Val	Ser	Leu	Ser	Thr	Ala	Asp	Pro	Gln	Gly	Val	Thr	Tyr	Ala	Glu	Leu
65					70					75				80	
Ser	Thr	Ser	Ala	Leu	Ser	Glu	Ala	Ala	Ser	Asp	Thr	Thr	Gln	Glu	Pro
				85					90					95	
Pro	Gly	Ser	His	Glu	Tyr	Ala	Ala	Leu	Lys	Val					
				100					105						

<210> 2983

<211> 614

<212> DNA

<213> Homo sapiens

<400> 2983

cgggcgctca gcatgtccgg gcactttctg ctgcaccca tccccgagtc ctctcggac
 60
 tacctactgc ccaaggacat caaactggcg gtgctgggcg ccggccgcgt gggcaagagc
 120
 gcaatgatcg tgcgcttcct gaccaagaga ttcattggag actatgaacc gaatacaggc
 180
 aagctgtatt cacggctggt ctatgtcgag ggggaccagc tctccctgca gatccaggat
 240
 actcccgggg gcgtccagat ccaagacagc ctccccagg tcgtcgattc cctgcaaattg
 300
 cgtgcagtgg ccgagggttt tctgctggtc tattccatca cagactatga cagctacttg
 360
 tccatccgac ccctttatca gcacatccgg aaggtccacc ctgactctaa agccctgtc
 420
 atcatcgtgg gcaacaaggg ggaccttttg catgcccggc aggtgcagac acaggacggg
 480
 attcagctag ccaatgagct gggcagcctg ttccttgaaa tttccactag cgaaaactac
 540
 gaagatgtct gtgatgtgtt tcagcatctc tgcaaagaag tgagcaagat gcacggcctc
 600

agtggggaaa gaag
614

<210> 2984
<211> 204
<212> PRT
<213> Homo sapiens

<400> 2984
Arg Pro Leu Ser Met Ser Gly His Phe Leu Leu Ala Pro Ile Pro Glu
1 5 10 15
Ser Ser Ser Asp Tyr Leu Leu Pro Lys Asp Ile Lys Leu Ala Val Leu
20 25 30
Gly Ala Gly Arg Val Gly Lys Ser Ala Met Ile Val Arg Phe Leu Thr
35 40 45
Lys Arg Phe Ile Gly Asp Tyr Glu Pro Asn Thr Gly Lys Leu Tyr Ser
50 55 60
Arg Leu Val Tyr Val Glu Gly Asp Gln Leu Ser Leu Gln Ile Gln Asp
65 70 75 80
Thr Pro Gly Gly Val Gln Ile Gln Asp Ser Leu Pro Gln Val Val Asp
85 90 95
Ser Leu Gln Met Arg Ala Val Ala Glu Gly Phe Leu Leu Val Tyr Ser
100 105 110
Ile Thr Asp Tyr Asp Ser Tyr Leu Ser Ile Arg Pro Leu Tyr Gln His
115 120 125
Ile Arg Lys Val His Pro Asp Ser Lys Ala Pro Val Ile Ile Val Gly
130 135 140
Asn Lys Gly Asp Leu Leu His Ala Arg Gln Val Gln Thr Gln Asp Gly
145 150 155 160
Ile Gln Leu Ala Asn Glu Leu Gly Ser Leu Phe Leu Glu Ile Ser Thr
165 170 175
Ser Glu Asn Tyr Glu Asp Val Cys Asp Val Phe Gln His Leu Cys Lys
180 185 190
Glu Val Ser Lys Met His Gly Leu Ser Gly Glu Arg
195 200

<210> 2985
<211> 4547
<212> DNA
<213> Homo sapiens

<400> 2985
nggcacgcgt gggaggcggc tgcccgcgac cggagacggc agtggtggcg gtagtggtgg
60
gtggcagggg cctgtgaccg ggagctgccc ccggaccgg gcaccatgag ccaaggcccc
120
cccacagggg agagcagcga gcccgaagca aaagtcctcc acactaagcg gctttaccgg
180
gctgtggtgg aggctgtgca tcgacttgac ctcatccttt gcaacaaaac tgcttatcaa
240
gaagtattca aaccagaaaa cattagcctg aggaacaagc tgcgtgagct ctgcgtcaag
300
cttatgttcc tgcacccagt ggactatggg agaaaggctg aggagctgct gtggagaaag
360

gtatactatg aagttatcca gcttatcaag actaacaaaa agcacatcca cagccggagc
420
actttggaat gtgcctacag gacgcacctg gttgctggta ttggcttcta ccagcatctc
480
cttctctata tccagtccca ctaccagctg gaactgcagt gctgcacga ctggacccat
540
gtcactgacc cctcatagg atgcaagaag ccagtgtctg cctcagggaa ggagatggat
600
tgggcacaga tggcatgtca ccgatgtctg gtgtatctgg gggatttgtc ccgatatcag
660
aatgaattag ctggcgtaga taccgagctg ctagccgaga gattttacta ccaagccctg
720
tcagtagctc ctcagattgg aatgcccttc aatcagctgg gcacctggc aggcagcaag
780
tactataatg tggaagccat gtattgctac ctgcgctgca tccagtcaga agtgtccttt
840
gagggagcct atgggaacct caagcggctg tatgacaagg cagccaaaat gtaccaccaa
900
ctgaagaagt gtgagactcg gaaactgtct cctggcaaaa agcgatgtaa agacattaaa
960
agggtgctag tgaactttat gtatctgcaa agcctcctac agcccaaaag cagctccgtg
1020
gactcagagc tgacctcact ttgccagtca gtcctggagg acttcaacct ctgcctcttc
1080
tacctgccct cctcacccaa cctcagcctg gccagtgagg atgaggagga gstatgagagt
1140
ggatatgctt tcttcccga ccttctcatc tttcaaattg tcatcatctg ccttatgtgt
1200
gtgcacagct tggagagagc aggatccaag cagtacagt cagccattgc cttcacccctg
1260
gccctctttt cccacctcgt caatcatgtc aacatacggc tgcaggctga gctggaagag
1320
ggcgagaatc ccgtcccggc attccagagt gatggcacag atgaaccaga gtccaaggaa
1380
cctgtggaga aagaggagga gccagatcct gagcctcctc ctgtaacacc ccaagtgggt
1440
gagggcagaa agagccgtaa gttctctcgc ctctcctgtc tccgccgtcg ccgccacca
1500
cccaaagttg gtgatgacag tgacctgagt gaaggctttg aatcggactc aagccatgac
1560
tcagcccggg ccagtgaggg ctcagacagt ggctctgaca agagtcttga aggtggggga
1620
acggcctttg atgctgaaac agactcggaa atgaatagcc aggagtcccg atcagacttg
1680
gaagatatgg aggaagagga ggggacacgg tcaccaaccc tggagcccc tcggggcaga
1740
tcagaggtc ccgattccct caatggccca ctgggcccc gtgaggctag cattgccagc
1800
aatctacaag ccatgtccac ccagatgttc cagactaage gctgcttccg actggcccc
1860
acctttagca acctgtcct ccagcccacc accaaccctc atacctcggc cagccacagg
1920
ccttgctca atggggatgt agacaagcct tcagagccag cctctgagga gggctctgag
1980

tccgagggga gtgagtcacg tggacgctcc tgtcggaaatg agcgcagcat ccaggagaag
2040
cttcaggctc tgatggccga aggtctgctt cctgctgtga aagtcttcct ggactggctt
2100
cggaccaacc ccgacctcat catcgtgtgt gcgcagagct ctcaaagtct gtggaaccgc
2160
ctgtctgtgt tgctgaatct gttgcctgct gctgggtgaac tccaggagtc tggcctggcc
2220
ttgtgtcctg aggtccaaga tcttcttgaa ggttgtgaac tgcttgacct cccctctagc
2280
cttctgctcc cagaggacat ggctcttcgt aacctgcccc cgctccgagc tgcccacaga
2340
cgctttaact ttgacacgga tcggccccctg ctccagcacct tagaggagtc agtgggtgcgc
2400
atctgctgca tccgcagctt tggtcatttc atcgcccgcc tgcaaggcag catcctgcag
2460
ttcaaccag aggttggcat ctctgtcagc attgcccagt ctgagcagga gagcctgctg
2520
cagcaggccc aggcacagtt ccgaatggca caggaggaag ctctgcggaa caggctcatg
2580
agagacatgg ctccagctacg acttcagctc gaagtgtctc agctggaggg cagcctgcag
2640
cagcccaagg ccagtcagc catgtctccc tacctcgtcc ctgacacca ggcctctgc
2700
caccatctcc ctgtcatccg ccaactggcc accagtggcc gcttcattgt catcatcca
2760
aggacagtga tcgatggcct ggatttctg aagaaggaa acaccagggg ccgggatggg
2820
attcgggtacc tggaggcaga gtttaaaaaa ggaaacagg acattcgtct ccagaaagag
2880
gtgggaaaga gctttgagcg gcataagctg aagaggcagg atgcagatgc ctggactctc
2940
tataagatcc tagacagctg caaacagctg actctggccc agggggcagg tgaggaggat
3000
ccgagtggca tggtgacct catcacagg cttccactgg acaacccag cgtgctttca
3060
ggcccatgc aggcagccct gcaggccgct gcccacgcca gtgtggacat caagaatgtt
3120
ctggacttct acaagcagtg gaaggaaatt ggttgatact gacccccagg ccctgcagt
3180
gggctgactc cagatctctc ctgccctccc tggcagccag gaccagcacc tgtagtcacc
3240
ccaccacacg cagactcatg cacgcacaca ggaggaggc ctagctgctc agaggctgca
3300
gggaggggcc aggagccggc tgggaggggt gggtcctttt gttgccaaaga cgtaggaaa
3360
gcgaggaaag tgcttgatt aggagagtct tgtgggcccc tggccagcct tcctgcctca
3420
gtccccctgc tgtctccagg ggcagggtgt aggcattgggt acctgcattt cactggaatg
3480
ggttcttgga tctctgaggg gaaggaaacg caaaagaggc ccttcttcct caccacagat
3540
gcagggtggg tggggccagg agtttgacc ctctaggtct tgggggaaga gctgggtaat
3600

acctggtgtc tgagtgattc tctgcagacc cttccccctcc tcaaggatca cccatcctcc
 3660
 tttcagcccc ctttatgggg accaggcagc tctggagcca gccacagggg ctggttagaga
 3720
 agcaaggcct ggagtggcct gcaccgagta gcaggggtcag ggttcgtgtg ctctcctcc
 3780
 tgctgcaggg gctgcacatc ccattgcccc acttctgctt tgtgtctccc tctgtctage
 3840
 ttccagggca gggagcaggc cccacctagg gctgcaggca gtctggcctg tgccagcacg
 3900
 gtctcctgtg cccaccagcc ccacaggtgc tgtgctttgt gctcttggct gctgtgctgg
 3960
 gacagaatgg gatgccagga agagaagaaa ggggggtgcag tctgaggcca ccacccccct
 4020
 tcctatctaa gggagggctg aagacaaggg gccggcattc agtgggcagc agaaaggaga
 4080
 ggctccttga agctgctcag tcagaggccc ccgtccccctc ttttgccctc cgcaggactg
 4140
 aagacctgaa ggggctggct tttggagtgt tgaggtgaat atctgggagc agagatcatg
 4200
 aatagctcag ggcagtgaat ggcgcaccaa gagcagggct gtgtgtggga ggctgcagcc
 4260
 aggattgcct cagctcctcc ccctcaggct gggaggatag cacaggctag gggctcgggg
 4320
 tggagggctc cagctctgct gccccacccc cagtactagc ctagcttccc aagctgtggc
 4380
 ttagaggata gttggcttcc tgctctctc ctctaaaata gcaagtctgg gaaatcctgg
 4440
 ggtgagtgga gtcacccac tcccagttgc tggcagagac tgagactaaa gcatcactta
 4500
 ataaaccccc caagcccaaa aaaaaaaaaa aaaaaaaaaa aaaaaaa
 4547

<210> 2986

<211> 988

<212> PRT

<213> Homo sapiens

<400> 2986

Glu	Ala	Val	His	Arg	Leu	Asp	Leu	Ile	Leu	Cys	Asn	Lys	Thr	Ala	Tyr
1			5						10					15	
Gln	Glu	Val	Phe	Lys	Pro	Glu	Asn	Ile	Ser	Leu	Arg	Asn	Lys	Leu	Arg
		20					25					30			
Glu	Leu	Cys	Val	Lys	Leu	Met	Phe	Leu	His	Pro	Val	Asp	Tyr	Gly	Arg
	35					40					45				
Lys	Ala	Glu	Glu	Leu	Leu	Trp	Arg	Lys	Val	Tyr	Tyr	Glu	Val	Ile	Gln
	50				55					60					
Leu	Ile	Lys	Thr	Asn	Lys	Lys	His	Ile	His	Ser	Arg	Ser	Thr	Leu	Glu
65				70					75					80	
Cys	Ala	Tyr	Arg	Thr	His	Leu	Val	Ala	Gly	Ile	Gly	Phe	Tyr	Gln	His
			85					90						95	
Leu	Leu	Leu	Tyr	Ile	Gln	Ser	His	Tyr	Gln	Leu	Glu	Leu	Gln	Cys	Cys
	100							105					110		
Ile	Asp	Trp	Thr	His	Val	Thr	Asp	Pro	Leu	Ile	Gly	Cys	Lys	Lys	Pro

		115					120					125				
Val	Ser	Ala	Ser	Gly	Lys	Glu	Met	Asp	Trp	Ala	Gln	Met	Ala	Cys	His	
	130						135					140				
Arg	Cys	Leu	Val	Tyr	Leu	Gly	Asp	Leu	Ser	Arg	Tyr	Gln	Asn	Glu	Leu	
145					150						155				160	
Ala	Gly	Val	Asp	Thr	Glu	Leu	Leu	Ala	Glu	Arg	Phe	Tyr	Tyr	Gln	Ala	
				165					170					175		
Leu	Ser	Val	Ala	Pro	Gln	Ile	Gly	Met	Pro	Phe	Asn	Gln	Leu	Gly	Thr	
		180					185					190				
Leu	Ala	Gly	Ser	Lys	Tyr	Tyr	Asn	Val	Glu	Ala	Met	Tyr	Cys	Tyr	Leu	
	195						200					205				
Arg	Cys	Ile	Gln	Ser	Glu	Val	Ser	Phe	Glu	Gly	Ala	Tyr	Gly	Asn	Leu	
	210					215					220					
Lys	Arg	Leu	Tyr	Asp	Lys	Ala	Ala	Lys	Met	Tyr	His	Gln	Leu	Lys	Lys	
225					230					235					240	
Cys	Glu	Thr	Arg	Lys	Leu	Ser	Pro	Gly	Lys	Lys	Arg	Cys	Lys	Asp	Ile	
				245					250					255		
Lys	Arg	Leu	Leu	Val	Asn	Phe	Met	Tyr	Leu	Gln	Ser	Leu	Leu	Gln	Pro	
		260					265					270				
Lys	Ser	Ser	Ser	Val	Asp	Ser	Glu	Leu	Thr	Ser	Leu	Cys	Gln	Ser	Val	
	275						280					285				
Leu	Glu	Asp	Phe	Asn	Leu	Cys	Leu	Phe	Tyr	Leu	Pro	Ser	Ser	Pro	Asn	
	290					295					300					
Leu	Ser	Leu	Ala	Ser	Glu	Asp	Glu	Glu	Glu	Tyr	Glu	Ser	Gly	Tyr	Ala	
305					310					315					320	
Phe	Leu	Pro	Asp	Leu	Leu	Ile	Phe	Gln	Met	Val	Ile	Ile	Cys	Leu	Met	
				325					330					335		
Cys	Val	His	Ser	Leu	Glu	Arg	Ala	Gly	Ser	Lys	Gln	Tyr	Ser	Ala	Ala	
		340						345					350			
Ile	Ala	Phe	Thr	Leu	Ala	Leu	Phe	Ser	His	Leu	Val	Asn	His	Val	Asn	
	355						360					365				
Ile	Arg	Leu	Gln	Ala	Glu	Leu	Glu	Glu	Gly	Glu	Asn	Pro	Val	Pro	Ala	
	370					375					380					
Phe	Gln	Ser	Asp	Gly	Thr	Asp	Glu	Pro	Glu	Ser	Lys	Glu	Pro	Val	Glu	
385					390					395					400	
Lys	Glu	Glu	Glu	Pro	Asp	Pro	Glu	Pro	Pro	Pro	Val	Thr	Pro	Gln	Val	
				405					410					415		
Gly	Glu	Gly	Arg	Lys	Ser	Arg	Lys	Phe	Ser	Arg	Leu	Ser	Cys	Leu	Arg	
			420					425					430			
Arg	Arg	Arg	His	Pro	Pro	Lys	Val	Gly	Asp	Asp	Ser	Asp	Leu	Ser	Glu	
		435					440					445				
Gly	Phe	Glu	Ser	Asp	Ser	Ser	His	Asp	Ser	Ala	Arg	Ala	Ser	Glu	Gly	
	450					455					460					
Ser	Asp	Ser	Gly	Ser	Asp	Lys	Ser	Leu	Glu	Gly	Gly	Gly	Thr	Ala	Phe	
465					470					475						

545					550					555					560
Asn	Leu	Leu	Leu	Gln	Pro	Thr	Thr	Asn	Pro	His	Thr	Ser	Ala	Ser	His
				565						570					575
Arg	Pro	Cys	Val	Asn	Gly	Asp	Val	Asp	Lys	Pro	Ser	Glu	Pro	Ala	Ser
			580					585					590		
Glu	Glu	Gly	Ser	Glu	Ser	Glu	Gly	Ser	Glu	Ser	Ser	Gly	Arg	Ser	Cys
		595					600					605			
Arg	Asn	Glu	Arg	Ser	Ile	Gln	Glu	Lys	Leu	Gln	Val	Leu	Met	Ala	Glu
	610					615				620					
Gly	Leu	Leu	Pro	Ala	Val	Lys	Val	Phe	Leu	Asp	Trp	Leu	Arg	Thr	Asn
625					630					635					640
Pro	Asp	Leu	Ile	Ile	Val	Cys	Ala	Gln	Ser	Ser	Gln	Ser	Leu	Trp	Asn
			645						650					655	
Arg	Leu	Ser	Val	Leu	Leu	Asn	Leu	Leu	Pro	Ala	Ala	Gly	Glu	Leu	Gln
		660						665					670		
Glu	Ser	Gly	Leu	Ala	Leu	Cys	Pro	Glu	Val	Gln	Asp	Leu	Leu	Glu	Gly
		675					680				685				
Cys	Glu	Leu	Pro	Asp	Leu	Pro	Ser	Ser	Leu	Leu	Leu	Pro	Glu	Asp	Met
	690					695					700				
Ala	Leu	Arg	Asn	Leu	Pro	Pro	Leu	Arg	Ala	Ala	His	Arg	Arg	Phe	Asn
705					710					715					720
Phe	Asp	Thr	Asp	Arg	Pro	Leu	Leu	Ser	Thr	Leu	Glu	Glu	Ser	Val	Val
			725						730					735	
Arg	Ile	Cys	Cys	Ile	Arg	Ser	Phe	Gly	His	Phe	Ile	Ala	Arg	Leu	Gln
		740						745				750			
Gly	Ser	Ile	Leu	Gln	Phe	Asn	Pro	Glu	Val	Gly	Ile	Phe	Val	Ser	Ile
	755						760					765			
Ala	Gln	Ser	Glu	Gln	Glu	Ser	Leu	Leu	Gln	Gln	Ala	Gln	Ala	Gln	Phe
	770					775					780				
Arg	Met	Ala	Gln	Glu	Glu	Ala	Arg	Arg	Asn	Arg	Leu	Met	Arg	Asp	Met
785					790					795					800
Ala	Gln	Leu	Arg	Leu	Gln	Leu	Glu	Val	Ser	Gln	Leu	Glu	Gly	Ser	Leu
			805						810					815	
Gln	Gln	Pro	Lys	Ala	Gln	Ser	Ala	Met	Ser	Pro	Tyr	Leu	Val	Pro	Asp
		820						825					830		
Thr	Gln	Ala	Leu	Cys	His	His	Leu	Pro	Val	Ile	Arg	Gln	Leu	Ala	Thr
		835					840					845			
Ser	Gly	Arg	Phe	Ile	Val	Ile	Ile	Pro	Arg	Thr	Val	Ile	Asp	Gly	Leu
	850					855				860					
Asp	Leu	Leu	Lys	Lys	Glu	His	Pro	Gly	Ala	Arg	Asp	Gly	Ile	Arg	Tyr
865					870					875					880
Leu	Glu	Ala	Glu	Phe	Lys	Lys	Gly	Asn	Arg	Tyr	Ile	Arg	Cys	Gln	Lys
			885						890					895	
Glu	Val	Gly	Lys	Ser	Phe	Glu	Arg	His	Lys	Leu	Lys	Arg	Gln	Asp	Ala
		900						905					910		
Asp	Ala	Trp	Thr	Leu	Tyr	Lys	Ile	Leu	Asp	Ser	Cys	Lys	Gln	Leu	Thr
		915					920					925			
Leu	Ala	Gln	Gly	Ala	Gly	Glu	Asp	Pro	Ser	Gly	Met	Val	Thr	Ile	
	930					935				940					
Ile	Thr	Gly	Leu	Pro	Leu	Asp	Asn	Pro	Ser	Val	Leu	Ser	Gly	Pro	Met
945					950					955					960
Gln	Ala	Ala	Leu	Gln	Ala	Ala	Ala	His	Ala	Ser	Val	Asp	Ile	Lys	Asn
			965					970						975	
Val	Leu	Asp	Phe	Tyr	Lys	Gln	Trp	Lys	Glu	Ile	Gly				

980

985

<210> 2987
 <211> 1016
 <212> DNA
 <213> Homo sapiens

<400> 2987
 ngtcgacaag gtgggaaggt aaccgatgga tgggggggga aggttggtgt gctcacggcc
 60
 acatcaataa ggtcaatac attccttggg gacaggaaga agaaattcaa ctagtttctt
 120
 gaaaggcggg cctgaaattc acaggggaga gcggatattc caggaggcag tctaagttat
 180
 ctgaggcgtg caactcacc agtgagacca agttactgta gttctccagc atcacgtccc
 240
 agtacaggtc cctctgagcg tcatccagggt cctgccactc ctcccagggtg aagtgcacag
 300
 ctacctctc aaaggacacc aactcctgta atgataccag gctggtgtag gtctccagca
 360
 tcacgttctt gtacagggtc ctctaagcat catccacgtc ctgccactct tcccagggtga
 420
 agtgcacagc cacatcttca aaggacacca accccagaga tttattcctt tctttagtct
 480
 gggccggcctt ggggcttggg tctatgtccc tgcgggtcgg tgcgagggcg aagaggaacc
 540
 cgtggggcccg ggggatcccg gggggccgga ccagtgttcc ccagttgtgg gagcagacgc
 600
 gtgggcgcat cacgggcggg cagggtgaa gtgcagctat gtttccagtg tctctgggt
 660
 gtttccaaga gcaacaggaa acgaataaat ctctgatgga gtctcactct gtcaccagg
 720
 ctggagtgcg gtggcacgat ctccgctcac tgcaagctcc acctcccagg ttcacaccat
 780
 cctcctgcct cagcctcccg agttgcaggg actacaggca cccgccacaa tgcccggtta
 840
 ttttttgtgt ttttagtaga gatgggggtt cactatgta gccaggatgg tcttgatctc
 900
 ctgacctcat tactcgccng actccggctc ccaaagtgtt ggaattacna gcgtgagaca
 960
 ccgcgcctgg tctccatcaa atgacttttt aaataaaata cggttctcac ctaaca
 1016

<210> 2988
 <211> 95
 <212> PRT
 <213> Homo sapiens

<400> 2988
 Trp Ser Leu Thr Leu Ser Pro Arg Leu Glu Cys Ser Gly Thr Ile Ser
 1 5 10 15
 Ala His Cys Lys Leu His Leu Pro Gly Ser His His Pro Pro Ala Ser
 20 25 30
 Ala Ser Arg Val Ala Gly Thr Thr Gly Thr Arg His Asn Ala Arg Leu

	35					40					45								
Phe	Phe	Val	Phe	Leu	Val	Glu	Met	Gly	Phe	His	Tyr	Val	Ser	Gln	Asp				
	50					55					60								
Gly	Leu	Asp	Leu	Leu	Thr	Ser	Leu	Leu	Ala	Xaa	Leu	Arg	Leu	Pro	Lys				
65					70					75					80				
Cys	Trp	Asn	Tyr	Xaa	Arg	Glu	Thr	Pro	Arg	Leu	Val	Ser	Ile	Lys					
				85					90					95					

<210> 2989

<211> 1185

<212> DNA

<213> Homo sapiens

<400> 2989

```

nnagtgcggc acccagaggc ggtcctgtag ctggggccggc ttggggccttg gtcctgcggg
60
tcggtgcgag ggcgaagagg aaccctgtggg cccgggggat cccggggggc cggaccagtg
120
ttccccagtt gtgggagcag acgcgtgggc gcatcgcggg cgggcagggc ctgaagtgca
180
gctatgtttc cagtgttttc tggctgtttc caagagctac aagaaaagaa taaatctctg
240
gagttggtgt cctttgagga ggtagctgtg cacttcacct gggaggagtg gcaggacctg
300
gatgacgctc agaggacct gtacagggac gtgatgctgg agacctacag cagcctggta
360
tcattggggc attgcattac caaacctgag atgatcttca agctagagca aggagcagag
420
ccatggatag tagaagaaac cctaaacctg agactttcag gtggaagcaa gaagcaagtt
480
ttctcaggta tttgccacag gagcctggtg gagctccagg aggtttgatc tctcttgatg
540
actctggaac tgtattccca attgtcaatt ggacatccct acgtatggga cctcagatat
600
ttcaaacatg atgtgtccaa gtctgtatca cttctggcca tcatattgtt cttttatatt
660
tccaaatttc acatcaccag taacaaacta gctgtgatca tggcagatag cctggaaata
720
aaactccctt ttttaccctt tgcacagcaa attgacatca aatcctgttt ctactttttt
780
ttttttaact attgcttccc tattctgtat tctcactgct ccatctcctg atgtaggagg
840
tcatctgttt tctctttttc ctctcctctg actcttaagc cctttcccat tctctttctc
900
aggaatggct gttaaaatgc caatatggtc ttgtaacttt cctgtactta gtgaacctcc
960
ttatttacac cctgtttgtg aagtggctgt gttcacctg ggtggacacg gaatgttttt
1020
ggcatgtaca aagagaattt tatgctgcct gtgtacagtt attaatttgt aagtacactc
1080
agctttttgt atctgtaggt ttaatatctg tgtatgtaag caaacttggg tgcaaaaatat
1140
ttgaaataaa atcagatgct tgcattctgta gtgaacataa aaaaa
1185

```

<210> 2990
 <211> 114
 <212> PRT
 <213> Homo sapiens

<400> 2990
 Met Phe Pro Val Phe Ser Gly Cys Phe Gln Glu Leu Gln Glu Lys Asn
 1 5 10 15
 Lys Ser Leu Glu Leu Val Ser Phe Glu Glu Val Ala Val His Phe Thr
 20 25 30
 Trp Glu Glu Trp Gln Asp Leu Asp Asp Ala Gln Arg Thr Leu Tyr Arg
 35 40 45
 Asp Val Met Leu Glu Thr Tyr Ser Ser Leu Val Ser Leu Gly His Cys
 50 55 60
 Ile Thr Lys Pro Glu Met Ile Phe Lys Leu Glu Gln Gly Ala Glu Pro
 65 70 75 80
 Trp Ile Val Glu Glu Thr Leu Asn Leu Arg Leu Ser Gly Gly Ser Lys
 85 90 95
 Lys Gln Val Phe Ser Gly Ile Cys His Arg Ser Leu Val Glu Leu Gln
 100 105 110
 Glu Val

<210> 2991
 <211> 980
 <212> DNA
 <213> Homo sapiens

<400> 2991
 ntatttttgt caatgtgcaa tattttttaca cttctgaatt tctctgtaca atgtccttaga
 60
 atctagaata taaaggttgc tggctcctgat cccttgcaga gtgagtgcag cagtgcacagc
 120
 ttggtgggct ccagctgacc cctccagagc ccctgagtgg tggcggtctg cagtcctcag
 180
 tcagcagcag cagacgtcac ccgtcatata gggccattca ctgaagtgtc acctggtgag
 240
 cttggttggc cagtcctctg ctcggtgactg ctgctgggag gcctgggagc cgcgcacttc
 300
 gcctctgcag tctcgggaca ctctctgctg tctttacaag cagcatcttg agaggtagac
 360
 agtttccctt cctcactttt gaagaccgca gtctctgtct tggcatctac agtgaggtctg
 420
 agcgtttcct tcatgccgcc attcatcact gtctcagtta ccttgtctgt actttctgca
 480
 tcctcctctc cgtcagagct ggcttccatg gccacactgc ctgccgcttc tggctgcact
 540
 gccagggcag ccgcactggg agtcagaggg tccatggggt cagtgtctgg ttccatttcc
 600
 actggagaat tactccttaa agaattcttt gtgctttctc aggggaagagt gaactctgaa
 660
 aaagaagccc agcccgcttc tttagttggc atcggctcct ctgtgctcca gacatcagat
 720

cccacagaat ccaatggagc accgtgggtt gtttccattg ggacatcaaa gttagctgac
780
cagttgggtg gttcactcag gtccacctcc attttatcct ccgtgttggc actgctgggt
840
tcaaacaagt cttgctttgc tccatcttct tcttcagagt ctgtactttc ctactgtct
900
gtactccccg agctggatcg tctttgggat tctggtgtga atgcgatgtg cttttcctcc
960
catatatctt cctcatcaga
980

<210> 2992

<211> 64

<212> PRT

<213> Homo sapiens

<400> 2992

Val	Val	Ala	Val	Cys	Ser	Pro	Gln	Ser	Ala	Ala	Ala	Asp	Val	Thr	Arg
1				5				10					15		
His	Thr	Gly	Pro	Phe	Thr	Glu	Val	Ser	Pro	Gly	Ala	Leu	Gly	Trp	Pro
			20					25				30			
Val	Leu	Cys	Ser	Gly	Leu	Leu	Leu	Gly	Gly	Leu	Gly	Ala	Ala	His	Phe
		35					40				45				
Ala	Ser	Ala	Val	Ser	Gly	His	Ser	Ser	Ala	Ser	Leu	Gln	Ala	Ala	Ser
	50					55					60				

<210> 2993

<211> 687

<212> DNA

<213> Homo sapiens

<400> 2993

nnatgccgc ggtccaggga gccgctgatg gtcactgaag ctgtggccct agagcggcgg
60
cgggagcagg aagaaaagga ggacatggag acccaggctg tggcaacgtc ccccgatggc
120
cgatacctca agtttgacat cgagattgga cgtggctcct tcaagacggt gtatcgaggg
180
ctagacaccg acaccacagt ggaggtggcc tgggtgtgagc tgcagactcg gaaactgtct
240
agagctgagc ggcagcgctt ctcagaggag gtggagatgc tcaaggggct gcagcacccc
300
aacatcgctc gcttctatga ttcgtggaag tcggtgctga ggggccaggc ttgcatcggt
360
ctggtcaccg aactcatgac ctcgggcacg ctcaagacgt acctgaggcg gttccgggag
420
atgaagccgc gggtccttca gcgctggagc cgccaaatcc tgcggggact tcatttccta
480
cactcccggg ttctcccat cctgcaccgg gatctcaagt gcgacaatgt ctttatcacg
540
ggacctactg gctctgtcaa aatcggggac ctgggcctgg ccacgctcaa gcgcgcctcc
600
tttgccaaga gtgtcatcgg gaccccgga ttcatggccc ccgagatgta cgaggaaaag
660

tacgatgagg ccgtggacgt gtacgcg
687

<210> 2994

<211> 229

<212> PRT

<213> Homo sapiens

<400> 2994

```

Xaa Cys Pro Arg Ser Arg Glu Pro Leu Met Val Thr Glu Ala Val Ala
 1           5           10           15
Leu Glu Arg Arg Arg Glu Gln Glu Glu Lys Glu Asp Met Glu Thr Gln
      20           25           30
Ala Val Ala Thr Ser Pro Asp Gly Arg Tyr Leu Lys Phe Asp Ile Glu
      35           40           45
Ile Gly Arg Gly Ser Phe Lys Thr Val Tyr Arg Gly Leu Asp Thr Asp
      50           55           60
Thr Thr Val Glu Val Ala Trp Cys Glu Leu Gln Thr Arg Lys Leu Ser
65           70           75           80
Arg Ala Glu Arg Gln Arg Phe Ser Glu Glu Val Glu Met Leu Lys Gly
      85           90           95
Leu Gln His Pro Asn Ile Val Arg Phe Tyr Asp Ser Trp Lys Ser Val
      100          105          110
Leu Arg Gly Gln Val Cys Ile Val Leu Val Thr Glu Leu Met Thr Ser
      115          120          125
Gly Thr Leu Lys Thr Tyr Leu Arg Arg Phe Arg Glu Met Lys Pro Arg
      130          135          140
Val Leu Gln Arg Trp Ser Arg Gln Ile Leu Arg Gly Leu His Phe Leu
145          150          155          160
His Ser Arg Val Pro Pro Ile Leu His Arg Asp Leu Lys Cys Asp Asn
      165          170          175
Val Phe Ile Thr Gly Pro Thr Gly Ser Val Lys Ile Gly Asp Leu Gly
      180          185          190
Leu Ala Thr Leu Lys Arg Ala Ser Phe Ala Lys Ser Val Ile Gly Thr
      195          200          205
Pro Glu Phe Met Ala Pro Glu Met Tyr Glu Glu Lys Tyr Asp Glu Ala
      210          215          220
Val Asp Val Tyr Ala
225

```

<210> 2995

<211> 1879

<212> DNA

<213> Homo sapiens

<400> 2995

```

nttttagtagt agtattacat tgtgaatttt attttcaaatt ttgatcaata aagatgaaaa
60
taataaaaatt aagcagtcaa aagaagtagc aaaaacaaga tagtcattca tatatacaga
120
acatatagat tcattttctag ttgattcaat cctattttatg tattttaaatt acaaaataat
180
ggccatctgg ctagttccaa cggtagagca tgagactctt aaaatacaaa atacatctta
240

```

atgtgtcaag aagaccacag ttagcaccag gaaaggaact ttacttttagc ttctgattac
300
tttttttattt ttattttttac tttattatta ttattattat ttttgagatg gagtctcact
360
ctgntcacc caggctggaat acagtgggtg gatctcagct cactgcaacc tccacctccc
420
aggttcaagc gattctcctg cctcagcctc ctgagtagct gggactctga tagatgcctg
480
ccaccacacc cgggtgattt ttgtattttt agtagagacg gggtttcgcc atgttgctca
540
ggctgggtctc gaactcccga cctcaagtga cttgctcacc ttggcctccc aaagtgctgg
600
gattacaggt gtgagccact gcaccagcc tggcagtcaa ttttaagcct cctatttccc
660
aggtttttagc ttaataatcc tcattagttt ttcagatttt tgtcagtcct gttttggggc
720
tattttgcct tagtgggcct aaacagaata ttaaaatata ttaataatcc atactgagag
780
tagagtataa atgggtttct cactccttag ggacacgagt ggaaacaata catcccatga
840
acacaggtga atgtccctgg ttatccctga gctgggcagt ttcacacaat cattttttct
900
ctgaggccaa agtctgtggt ttgatcatct tagcagcttc cagaacagaa agtaggttta
960
ctttgtctcc aaattctttt tctcgggtgct caagaagaat gccctgcttt cctgatccca
1020
ccacgaaaac tcccccaagg atgaagcctt ctcttccag gtttccagag aagcctccgt
1080
tccaggctcg gaagaagttg taccacactc ccagacggat aaatcccata aacatcatct
1140
tccgcctttg tggaccatag aactttttct tttcatccag gaagatttct cttttgaaat
1200
aaggctggaa atccttctact tcagtctga tgtgctcctt taccactgca tagaggggga
1260
cgcccagctg gtccaacatg cttttcaggg aggacagatc cgcagcttcc tctcgacaga
1320
ggaaacagcc tggcctccgc acggccataa tcacagctcc atttttttcc catagctcct
1380
ttgctttgaa agtccttggc tccttctcca gtgttttcag gtctatatcc tccaggtact
1440
ccaggggccgc tttctggggc ttggacagaa acacgtctgt gttggcaagc agcaatgcca
1500
aggcagcagc ccccagggtc cctgcaccaa tggaccacat ccccatgggtg aagaaacttg
1560
ggtcctggag gaaagacatt tctcaagtgc ctcccttctg ccggcctttt accgccccga
1620
cgcccgggcg ctaaggggccc aaaccgcccg gcccgagggg tcccaggggc gggccccgga
1680
gtacctggag gatatagacc tgaaaacact ggagaaggaa ccaaggactt tcaaagcaaa
1740
ggagctatgg gaaaaaaatg gagctgtgat tatggccgtg cggaggccag gctgtttcct
1800
ctgtcgagag gaagctgcgg atctgtcctc cctgaaaagc atgttgagcc agctgggcgt
1860

ccccctctat gcagtggta
1879

<210> 2996
<211> 101
<212> PRT
<213> Homo sapiens

<400> 2996
His Gln Glu Arg Asn Phe Thr Leu Ala Ser Asp Tyr Phe Phe Ile Phe
1 5 10 15
Ile Phe Thr Leu Leu Leu Leu Leu Phe Leu Arg Trp Ser Leu Thr
20 25 30
Leu Xaa Thr Gln Ala Gly Ile Gln Trp Cys Asp Leu Ser Ser Leu Gln
35 40 45
Pro Pro Pro Pro Arg Phe Lys Arg Phe Ser Cys Leu Ser Leu Leu Ser
50 55 60
Ser Trp Asp Ser Asp Arg Cys Leu Pro Pro His Pro Gly Asp Phe Cys
65 70 75 80
Ile Phe Ser Arg Asp Gly Val Ser Pro Cys Cys Ser Gly Trp Ser Arg
85 90 95
Thr Pro Asp Leu Lys
100

<210> 2997
<211> 800
<212> DNA
<213> Homo sapiens

<400> 2997
actcagatgg gcaccatcag tgctagacaa gaattctatt cctcttatcc aggcctccca
60
gagccatcca aagtgcacatc tccagtgggtc acctcttcca ccataaaaga cattgtttct
120
acaaccatac ctgcttcctc tgagataaca agaattgaga tggagtcaac atccaccctg
180
acccccacac caagggagac cagcacctcc caggagatcc actcagccac aaagccaagc
240
actgttcctt acaaggcact cactagtgcc acgattgagg actccatgac acaagtcattg
300
tcctctagca gaggacctag ccctgatcag tccacaatgt cacaagacat atccactgaa
360
gtgatcacca ggctctctac ctcccccatc aagacagaat ctacagaaat gaccattacc
420
acccaaacag ggtctcctgg ggctacatca aggggtaccc ttaccttgga cacttcaaca
480
acttttatgt cagggaccca ctcaactgca tctcaaagat ttccacactc acagatgacc
540
gctcttatga gtagaactcc tggagatgtg ccatggctaa cccatccctc tggggaagag
600
ccgcctctg cctctttctc actgggttca cctgtcttga cctcattttt ttcgtttttt
660
gccattccc aaaaacctcc accttttttg gttcctgggc aaactttttc cctagggctg
720

gggaaaccca aaatgtgggg ccaacccaga actgaaacat tcccccaat ggacaacctt
 780
 tttgaaaagg gccctttgc
 800

<210> 2998
 <211> 266
 <212> PRT
 <213> Homo sapiens

<400> 2998
 Thr Gln Met Gly Thr Ile Ser Ala Arg Gln Glu Phe Tyr Ser Ser Tyr
 1 5 10 15
 Pro Gly Leu Pro Glu Pro Ser Lys Val Thr Ser Pro Val Val Thr Ser
 20 25 30
 Ser Thr Ile Lys Asp Ile Val Ser Thr Thr Ile Pro Ala Ser Ser Glu
 35 40 45
 Ile Thr Arg Ile Glu Met Glu Ser Thr Ser Thr Leu Thr Pro Thr Pro
 50 55 60
 Arg Glu Thr Ser Thr Ser Gln Glu Ile His Ser Ala Thr Lys Pro Ser
 65 70 75 80
 Thr Val Pro Tyr Lys Ala Leu Thr Ser Ala Thr Ile Glu Asp Ser Met
 85 90 95
 Thr Gln Val Met Ser Ser Ser Arg Gly Pro Ser Pro Asp Gln Ser Thr
 100 105 110
 Met Ser Gln Asp Ile Ser Thr Glu Val Ile Thr Arg Leu Ser Thr Ser
 115 120 125
 Pro Ile Lys Thr Glu Ser Thr Glu Met Thr Ile Thr Thr Gln Thr Gly
 130 135 140
 Ser Pro Gly Ala Thr Ser Arg Gly Thr Leu Thr Leu Asp Thr Ser Thr
 145 150 155 160
 Thr Phe Met Ser Gly Thr His Ser Thr Ala Ser Gln Arg Phe Ser His
 165 170 175
 Ser Gln Met Thr Ala Leu Met Ser Arg Thr Pro Gly Asp Val Pro Trp
 180 185 190
 Leu Thr His Pro Ser Gly Glu Glu Pro Ala Ser Ala Ser Phe Ser Leu
 195 200 205
 Ala Ser Pro Val Leu Thr Ser Phe Phe Ser Phe Phe Ala His Ser Gln
 210 215 220
 Lys Pro Pro Pro Phe Leu Val Pro Gly Gln Thr Phe Ser Leu Gly Leu
 225 230 235 240
 Gly Lys Pro Lys Met Trp Gly Gln Pro Arg Thr Glu Thr Phe Pro Pro
 245 250 255
 Met Asp Asn Leu Phe Glu Lys Gly Pro Phe
 260 265

<210> 2999
 <211> 550
 <212> DNA
 <213> Homo sapiens

<400> 2999
 cccgggagct gtcacagccc agctgagtgt gcacatgctc ggggtagtgc tgacatgcc
 60

acccccttgc cactttggcc ccctccaggc tttgggcact gacaagcatg ggaaggaggc
 120
 tgaggggtgc actgaggaca gcccagtgtt ggctgtcagg cacccttaa catgaacagc
 180
 ctgggtcacca tgaacagcag caggaggcag acaggctcct ggggtggaaag aagctgggtcc
 240
 acagtgaaga cccacctcca agccagggaag agcctgaagc ctgggggatg ggctgccagt
 300
 cccagaaacc gcaagggcaa cttgtgggtgc tttccctgg gccacccat ggccgcccac
 360
 ggacgaattg gcatgcactt tctccctctt gagggccata aaagcccctg ggctcagcca
 420
 gagctgagcg gatatcagga cgacaagctg cacagaggta ctaccatac caaggcctcc
 480
 tctctgtga gagctgcaca tacaatggaa tgacctgcct gtagagagag cttccctc
 540
 cagggtctcc
 550

<210> 3000

<211> 167

<212> PRT

<213> Homo sapiens

<400> 3000

Met	Cys	Ser	Ser	Gln	Gln	Arg	Gly	Gly	Leu	Gly	Met	Gly	Ser	Thr	Ser
1				5					10					15	
Val	Gln	Leu	Val	Val	Leu	Ile	Ser	Ala	Gln	Leu	Trp	Leu	Ser	Pro	Gly
			20					25					30		
Ala	Phe	Met	Gly	Leu	Arg	Gly	Glu	Lys	Val	His	Ala	Asn	Ser	Ser	Met
		35					40					45			
Gly	Gly	His	Gly	Trp	Ala	Gln	Gly	Lys	Ala	Pro	Gln	Val	Ala	Leu	Ala
	50					55				60					
Val	Ser	Gly	Thr	Gly	Asp	Pro	Ser	Pro	Arg	Leu	Gln	Ala	Phe	Pro	Gly
65					70				75					80	
Leu	Glu	Val	Gly	Leu	His	Cys	Gly	Pro	Ala	Ser	Phe	His	Pro	Gly	Ala
			85					90					95		
Cys	Leu	Pro	Pro	Ala	Ala	Val	His	Gly	Asp	Gln	Ala	Val	His	Val	Lys
		100						105				110			
Gly	Cys	Leu	Gln	Ala	Ser	Thr	Gly	Leu	Ser	Ser	Val	His	Pro	Ser	Ala
		115					120				125				
Ser	Phe	Pro	Cys	Leu	Ser	Val	Pro	Lys	Ala	Trp	Arg	Gly	Pro	Lys	Trp
	130					135				140					
Gln	Gly	Gly	Trp	His	Val	Ser	Thr	Thr	Pro	Ser	Met	Cys	Thr	Leu	Ser
145					150					155				160	
Trp	Ala	Val	Thr	Ala	Pro	Gly									
					165										

<210> 3001

<211> 1092

<212> DNA

<213> Homo sapiens

<400> 3001

agatctttgt gaggcctgaa tgaaatggcc ccattcagaa ttccccagga tgtcatccat
 60
 aatagctctg cctggctgag tttgaaaggt cactgttctg tttcagcgtt gagatgcctt
 120
 gaagtacaga ggttgagccc ctatgtatgc ctgggggagt cccagaaagt ggaatcccaa
 180
 ccttgctcag ctcaccagtg tttcttctat aaccagaca ttgcaaagac agcagtaccc
 240
 actgaggcat ccagcccagc tcaggccctg ccaccnca gtaccaaagc atcattgtca
 300
 ggcaagggat acagaacaca gtgctctcac cagactgcag cttgggggac acccagcacg
 360
 gagagaagct gaggcggaac tgcactatct accggccctg gttctcccc tacagctact
 420
 tcgtgtgtgc agacaaagag agccagctgg aggcctatga cttcccagag gtgcagcagg
 480
 atgagggcaa gtgggacaac tgcctttctg aggacatggc tgagaacatc tgttcgtcct
 540
 cttctcccc agagaacact tgccctcgag aagccaccaa gaaatccagg catggcctgg
 600
 actccatcac atcccaggac atcctaattg cttccagggtg gcaccagca cagcagaatg
 660
 gctacaagtg cgtggcctgc tgccgcatgt accccaccct ggacttctc aagagccaca
 720
 tcaagagggg cttcagggag ggcttcagct gcaagggtgta ctaccgcaag ctcaaagccc
 780
 tctggagcaa ggagcagaag gccggctgg gagacaggct ctcctccggc agctgccagg
 840
 ccttcaatag tcctgctgaa caccttaggc aaattggcgg tgaagcctac ttatgtctct
 900
 agagagatgc caataaagt agtcacagcc ttctgtccag tctgagggtca cccgcacag
 960
 cctgtgttcc ttcccagaac ccggtctca tcacctttgg ctaatgggtg cctagcaaca
 1020
 ccaggcacac accctcccct ttctctctt taaaaataaa gacaatactt gaagtttggg
 1080
 aaaatcaaaa aa
 1092

<210> 3002

<211> 115

<212> PRT

<213> Homo sapiens

<400> 3002

Met	Ala	Pro	Phe	Arg	Ile	Pro	Gln	Asp	Val	Ile	His	Asn	Ser	Ser	Ala
1				5					10					15	
Trp	Leu	Ser	Leu	Lys	Gly	His	Cys	Ser	Val	Ser	Ala	Leu	Arg	Cys	Leu
			20					25					30		
Glu	Val	Gln	Arg	Leu	Ser	Pro	Tyr	Val	Cys	Leu	Gly	Glu	Ser	Gln	Lys
		35					40				45				
Val	Glu	Ser	Gln	Pro	Cys	Ser	Ala	His	Gln	Cys	Phe	Phe	Tyr	Asn	Pro
	50					55					60				
Asp	Ile	Ala	Lys	Thr	Ala	Val	Pro	Thr	Glu	Ala	Ser	Ser	Pro	Ala	Gln

<400> 3004															
Met	Glu	Pro	Arg	Ala	Val	Ala	Glu	Ala	Val	Glu	Thr	Gly	Glu	Glu	Asp
1				5					10					15	
Val	Ile	Met	Glu	Ala	Leu	Arg	Ser	Tyr	Asn	Gln	Glu	His	Ser	Gln	Ser
			20					25					30		
Phe	Thr	Phe	Asp	Asp	Ala	Gln	Gln	Glu	Asp	Arg	Lys	Arg	Leu	Ala	Glu
			35				40					45			
Leu	Leu	Val	Ser	Val	Leu	Glu	Gln	Gly	Leu	Pro	Pro	Ser	His	Arg	Val
	50					55				60					
Ile	Trp	Leu	Gln	Ser	Val	Arg	Ile	Leu	Ser	Arg	Asp	Arg	Asn	Cys	Leu
65					70					75				80	
Asp	Pro	Phe	Thr	Ser	Arg	Gln	Ser	Leu	Gln	Ala	Leu	Ala	Cys	Tyr	Ala
				85					90					95	
Asp	Ile	Ser	Val	Ser	Glu	Gly	Ser	Val	Pro	Glu	Ser	Ala	Asp	Met	Asp
			100					105					110		
Val	Val	Leu	Glu	Ser	Leu	Lys	Cys	Leu	Cys	Asn	Leu	Val	Leu	Ser	Ser
		115					120					125			
Pro	Val	Ala	Gln	Met	Leu	Ala	Ala	Glu	Ala	Arg	Leu	Val	Val	Lys	Leu

130 135 140
 Thr Glu Arg Val Gly Leu Tyr Arg Glu Arg Ser
 145 150 155

<210> 3005
 <211> 799
 <212> DNA
 <213> Homo sapiens

<400> 3005
 gtgcacagcg tgggtcaacca cacgccctcc cagctcctca aggagggtcat cctgggtggac
 60
 gacaacagtg acaactgtgga actcaagttc aatctggacc agtacgtcaa caagcgggtac
 120
 ccaggcctcg tgaagattgt ccgcaacagc cggcgggaag gactgatccg cgcgcgggtg
 180
 cagggctgga aggcggccac cgccccagtc gtcggcttct ttgatgcca cgtcgagttc
 240
 aacacgggct gggccgagcc cgcactgtcg cggatccgag aggaccggcg tcgcatcgtg
 300
 ctgccagcca tcgacaacat caagtacagc acgtttgagg tgcagcagta tgcgaacgcc
 360
 gcccatggct acaactgggg cctctgggtgc atgtacatca tcccccgca ggactgggtg
 420
 gaccgcggcg acgagtcagc acccatcagg accccagcca tgatcgggtg ctccttcgta
 480
 gtggaccgcg agtacttcgg agacattggg ctgctggacc ccggcatgga ggtgtatggc
 540
 ggcgagaacg tagaactggg catgaggggtg tggcagtgtg gcggcagcat ggaggtgctg
 600
 ccttgctccc gcgtggccca catcgagcgc accaggaagc cctacaacaa cgacattgac
 660
 tactacgcca agcgcaacgc cctgcgcacc gccgaggtgt ggatggatga cttcaagtcc
 720
 cacgtgtaca tggcctggaa catccccatg tcgaaccag ggggtggactt cggggacgtg
 780
 tctgagaggc tggccctgc
 799

<210> 3006
 <211> 266
 <212> PRT
 <213> Homo sapiens

<400> 3006
 Val His Ser Val Val Asn His Thr Pro Ser Gln Leu Leu Lys Glu Val
 1 5 10 15
 Ile Leu Val Asp Asp Asn Ser Asp Asn Val Glu Leu Lys Phe Asn Leu
 20 25 30
 Asp Gln Tyr Val Asn Lys Arg Tyr Pro Gly Leu Val Lys Ile Val Arg
 35 40 45
 Asn Ser Arg Arg Glu Gly Leu Ile Arg Ala Arg Leu Gln Gly Trp Lys
 50 55 60
 Ala Ala Thr Ala Pro Val Val Gly Phe Phe Asp Ala His Val Glu Phe

```

65          70          75          80
Asn Thr Gly Trp Ala Glu Pro Ala Leu Ser Arg Ile Arg Glu Asp Arg
      85          90          95
Arg Arg Ile Val Leu Pro Ala Ile Asp Asn Ile Lys Tyr Ser Thr Phe
      100          105          110
Glu Val Gln Gln Tyr Ala Asn Ala Ala His Gly Tyr Asn Trp Gly Leu
      115          120          125
Trp Cys Met Tyr Ile Ile Pro Pro Gln Asp Trp Leu Asp Arg Gly Asp
      130          135          140
Glu Ser Ala Pro Ile Arg Thr Pro Ala Met Ile Gly Cys Ser Phe Val
      145          150          155          160
Val Asp Arg Glu Tyr Phe Gly Asp Ile Gly Leu Leu Asp Pro Gly Met
      165          170          175
Glu Val Tyr Gly Gly Glu Asn Val Glu Leu Gly Met Arg Val Trp Gln
      180          185          190
Cys Gly Gly Ser Met Glu Val Leu Pro Cys Ser Arg Val Ala His Ile
      195          200          205
Glu Arg Thr Arg Lys Pro Tyr Asn Asn Asp Ile Asp Tyr Tyr Ala Lys
      210          215          220
Arg Asn Ala Leu Arg Thr Ala Glu Val Trp Met Asp Asp Phe Lys Ser
      225          230          235          240
His Val Tyr Met Ala Trp Asn Ile Pro Met Ser Asn Pro Gly Val Asp
      245          250          255
Phe Gly Asp Val Ser Glu Arg Leu Ala Leu
      260          265

```

<210> 3007

<211> 536

<212> DNA

<213> Homo sapiens

<400> 3007

```

cttaagagag gttgcaatgt gaatgataga gatggattga cagatatgac tcttttacat
60
tatacctgca aatctggagc tcatggtatt ggtgatgtgg aaacagctgt aaaatttgca
120
actcagctta ttgacctggg agcagacatt agtttgcgga gtcgctggac aaacatgaat
180
gctttgcatt atgctgctta ttttgatgtc cctgaactta taagagtgat ttgaaaaca
240
tcgaaaccaa aagatgtgga tgccccttgc agtgatttta attttggaaac agctttgcat
300
attgcagcat acaacttgtg tgcaggtgct gtgaagtgcc tcttggagca gggagcaaat
360
cctgcattta ggaatgacaa aggacagatc cctgctgatg ttgttccaga cccagtagat
420
atgccgttag agatggctga cgccgcagcc actgctaagg aaatcaagca gatgcttcta
480
gatgcggtgc ctctgtcatg taacatctca aaggccatgc tcccccttc acgcgt
536

```

<210> 3008

<211> 163

<212> PRT

<213> Homo sapiens

<400> 3008

```

Met Thr Leu Leu His Tyr Thr Cys Lys Ser Gly Ala His Gly Ile Gly
 1           5           10           15
Asp Val Glu Thr Ala Val Lys Phe Ala Thr Gln Leu Ile Asp Leu Gly
      20           25           30
Ala Asp Ile Ser Leu Arg Ser Arg Trp Thr Asn Met Asn Ala Leu His
      35           40           45
Tyr Ala Ala Tyr Phe Asp Val Pro Glu Leu Ile Arg Val Ile Leu Lys
      50           55           60
Thr Ser Lys Pro Lys Asp Val Asp Ala Pro Cys Ser Asp Phe Asn Phe
65           70           75           80
Gly Thr Ala Leu His Ile Ala Ala Tyr Asn Leu Cys Ala Gly Ala Val
      85           90           95
Lys Cys Leu Leu Glu Gln Gly Ala Asn Pro Ala Phe Arg Asn Asp Lys
      100          105          110
Gly Gln Ile Pro Ala Asp Val Val Pro Asp Pro Val Asp Met Pro Leu
      115          120          125
Glu Met Ala Asp Ala Ala Ala Thr Ala Lys Glu Ile Lys Gln Met Leu
      130          135          140
Leu Asp Ala Val Pro Leu Ser Cys Asn Ile Ser Lys Ala Met Leu Pro
145          150          155          160
Pro Ser Arg

```

<210> 3009

<211> 1335

<212> DNA

<213> Homo sapiens

<400> 3009

```

nnacgcgtca gtctggaaag ggcacttata agagctacca gctgccctgt tggcttcgct
60
ggtcggatcg tctccttggc cccgccaaac aggcgggggg agcggccccc actgtggggc
120
catggcagta gtctcctcgt tctccgccgc cgctagccta gctgagtcgc cggcttctgc
180
gctaggggct cccaccgcct ccgcaggcta aggagccgct gccaccaacg agctgtgagg
240
gttactatgc tccctctttg ccgccgtctc ctctcttgc ccgcgcaggg acccctctgg
300
ctgctcagtc ctgcctcagt gtcaaaccag aagagaagta aaattcaaca aaaatztatg
360
tgtggagttc cttcttaaaa gaagaaaaaa gtgattatgt agactatgga tcggagcaaa
420
cggaattcaa ttgcaggatt tctccacgt gtggagcgtc ttgaagagtt tgaaggaggt
480
ggaggaggag aaggaaatgt gagccagggt ggaagagttt ggccatcttc gtatcgagct
540
cttataagtg ctttttccag actgacgcgt ttggatgatt tcacctgtaa aaaaataggg
600
tctggcttct tttctgaagt gttcaaggta cgacaccgag cttctgggtc ggtgatggct
660

```

ctttaagatga acacattgag cagtaaccgg gcaaacaatgc tgaaagaagt acagctcatg
 720
 aatagactct cccatcccaa catccttagg ttcatgggtg tatgtgttca tcaaggacaa
 780
 ttgcatgcac ttacagagta tatcaactcc gggaacctgg aacagttgct agacagtaac
 840
 ctgcatttgc cttggactgt gagggtaaaa ctggcctatg acatagcagt gggcctcagc
 900
 taccttcact tcaaaggcat ttttcatcgg gacctcacat ctaagaactg cctgataaag
 960
 agggatgaga atgggttactc tgcagtggta gctgactttg gcctggctga gaagatcccc
 1020
 gatgtcagca tggggagtga gaagctggcc gtggtgggtt cccattctg gatggcacct
 1080
 gaggttctcc gagatgagcc ctataatgaa aaggcagatg tggttctctta tggtatcatc
 1140
 ctctgcgaga tcatcgctcg catccaggcc gatccggact atcttccccg cacagagaat
 1200
 ttcgggctgg actatgatgc tttccagcac atgggtgggag actgtcccccc agattttctg
 1260
 caacttactt tcaactgctg taacgtgagt gtctttctcc ctctgccttt catcaggggc
 1320
 tggctgaacc ctttt
 1335

<210> 3010

<211> 310

<212> PRT

<213> Homo sapiens

<400> 3010

Met	Asp	Arg	Ser	Lys	Arg	Asn	Ser	Ile	Ala	Gly	Phe	Pro	Pro	Arg	Val
1				5					10					15	
Glu	Arg	Leu	Glu	Glu	Phe	Glu	Gly	Gly	Gly	Gly	Gly	Glu	Gly	Asn	Val
			20					25					30		
Ser	Gln	Val	Gly	Arg	Val	Trp	Pro	Ser	Ser	Tyr	Arg	Ala	Leu	Ile	Ser
		35					40					45			
Ala	Phe	Ser	Arg	Leu	Thr	Arg	Leu	Asp	Asp	Phe	Thr	Cys	Lys	Lys	Ile
	50					55					60				
Gly	Ser	Gly	Phe	Phe	Ser	Glu	Val	Phe	Lys	Val	Arg	His	Arg	Ala	Ser
65					70				75					80	
Gly	Gln	Val	Met	Ala	Leu	Lys	Met	Asn	Thr	Leu	Ser	Ser	Asn	Arg	Ala
				85				90					95		
Asn	Met	Leu	Lys	Glu	Val	Gln	Leu	Met	Asn	Arg	Leu	Ser	His	Pro	Asn
		100					105						110		
Ile	Leu	Arg	Phe	Met	Gly	Val	Cys	Val	His	Gln	Gly	Gln	Leu	His	Ala
	115					120					125				
Leu	Thr	Glu	Tyr	Ile	Asn	Ser	Gly	Asn	Leu	Glu	Gln	Leu	Leu	Asp	Ser
	130					135					140				
Asn	Leu	His	Leu	Pro	Trp	Thr	Val	Arg	Val	Lys	Leu	Ala	Tyr	Asp	Ile
145					150					155				160	
Ala	Val	Gly	Leu	Ser	Tyr	Leu	His	Phe	Lys	Gly	Ile	Phe	His	Arg	Asp
			165					170					175		
Leu	Thr	Ser	Lys	Asn	Cys	Leu	Ile	Lys	Arg	Asp	Glu	Asn	Gly	Tyr	Ser

```
<210> 3011
<211> 3253
<212> DNA
<213> Homo sapiens
```

2239

cccagccagt atggccagga ggtgtatgac acacccccca tggctgtcaa gggccccaat
960
ggccgagacc cgttgctgga ggtgtatgac gtgccccca gtgtggagaa gggcctgcc
1020
ccgtccaacc accacgcagt ctacgacgtt cctccatcgg tgagcaagga tgtgcccgat
1080
ggcccactgc tgcgtgagga gacctacgat gtgcccccg ccttcgcca ggccaagccc
1140
tttgaccggg ccgcaccccc actggtactg ggtgcgcccc ctccagactc ccgcccggcc
1200
gaggacgtgt attacgtgcc gccccggct cctgacctct acgacgtgcc ccctggcttg
1260
cggcgccctg gcccgggcac cctgtacgat gtgccccgtg aacgggtgct tcctcctgag
1320
gtggctgatg gtggcgtggt cgacagtggg gtgtatgcgg tgccctcccc agctgaacgt
1380
gaagccccgg cagagggcaa gcgcctgtcg gcctccagca ccggcagcac acgcagcagc
1440
cagtctgcgt cctccttgga ggtggcaggg ccgggcccggg aacccttgga gctggaagtt
1500
gctgtggagg ccctggcacg gctgcagcag ggtgtgagcg ccaccgttgc ccaccttctg
1560
gacctggcag gcagcgccgg tgcgactgga ggctggcgta gcccctctga gccacaggag
1620
ccgctgggtgc aggacctgca ggctgctgtg gccgccgtcc agagtgccgt ccacgagctg
1680
ttggagttag ccgcagcgc ggtgggcaat gctgccaca catctgaccg tgccctgcat
1740
gccaagctta gccggcagct gcagaagatg gaggacgtgc accagacgct ggtggcacat
1800
ggtcaggccc tcgacgctgg ccggggaggc tctggagcca cccttgagga cctggaccgg
1860
ctggtggcct gctcgcgggc tgtgcccag gacgccaagc agctggcctc ctttctgcac
1920
ggcaatgcct cactgctctt cagacggacc aaggccactg ccccgggggc tgaggggggt
1980
ggcacccctgc accccaaccc cactgacaag accagcagca tccagtacg acccctgccc
2040
tcaccccccta agttcacctc ccaggactcg ccagatgggc agtacgagaa cagcgagggg
2100
ggctggatgg aggactatga ctacgtccac ctacagggga aggaggaatt tgagaagacc
2160
cagaaggagc tgctggaaaa gggcaacatc acgcggcagg gcaagagcca gctggagttg
2220
cagcagctga agcagtttga acgactggaa caggaggtgt cacggcccat agaccacgac
2280
ctggccaact ggacgccagc ccaaccctg gccccggggc gaacaggcgg cctggggccc
2340
tcggaccggc agctgctgct cttctacctg gagcagtgtg aggccaacct gaccacactg
2400
accaacgccg tggacgcctt ctttaccgcc gtggccacca accagccgcc caagatcttt
2460
gtggcgca caagttcgt catcctcagc gccacaagc tgggtgttcat cggggacaca
2520

ctgtcacggc aggccaaaggc tgctgacgtg cgcagccagg tgacccacta cagcaacctg
 2580
 ctgtgcgacc tcctgcgcgg catcgtggcc accaccaagg ccgctgcctt gcagtaccca
 2640
 tcgccttccg cggcccagga catggtggag aggggtcaagg agctggggcca cagcaccag
 2700
 cagttccgcc gcgtcctagg ccagctggca gccgcctgag ggtggtgacc ccaggaggga
 2760
 ggcaggggag ggggtgcggcg gtcccagctc cctggctccc atgtcaagag tcgctgtgcc
 2820
 acaggcttag ggacaggacc ccagctctgc gtcggctctg gtgccctgga tgcccaggaa
 2880
 tctgtatata tttatggccg ggcaggggtgt ggggccatgc ctctcagga gccgaagccc
 2940
 aggggccggc cagtggcctt cccagcatg caccacgggc ccgggttggg tcaccagacg
 3000
 gggctggagt gtgagggtcc tgcagcctgc aggacctcgt gccaccccga gggctgagcc
 3060
 tgggtcccacg agggtgccgt gtcccctgac agggccagtg cagtttggtg tgtcctccgc
 3120
 ctttccagga gaagaacctg aagaactatt tttcgttatt ggttttccaa tcatttgact
 3180
 aagagtctcc atttaaataa agttttttaa aggaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 3240
 aaaaaaaaaa aaa
 3253

<210> 3012

<211> 870

<212> PRT

<213> Homo sapiens

<400> 3012

Met	Asn	His	Leu	Asn	Val	Leu	Ala	Lys	Ala	Leu	Tyr	Asp	Asn	Val	Ala
1				5					10					15	
Glu	Ser	Pro	Asp	Glu	Leu	Ser	Phe	Arg	Lys	Gly	Asp	Ile	Met	Thr	Val
			20					25					30		
Leu	Glu	Gln	Asp	Thr	Gln	Gly	Leu	Asp	Gly	Trp	Trp	Leu	Cys	Ser	Leu
		35				40						45			
His	Gly	Arg	Gln	Gly	Ile	Val	Pro	Gly	Asn	Arg	Leu	Lys	Ile	Leu	Val
	50				55					60					
Gly	Met	Tyr	Asp	Lys	Lys	Pro	Ala	Gly	Pro	Gly	Ser	Gly	Pro	Pro	Ala
65					70				75					80	
Thr	Pro	Ala	Gln	Pro	Gln	Pro	Gly	Leu	His	Ala	Pro	Ala	Pro	Pro	Ala
			85					90					95		
Ser	Gln	Tyr	Thr	Pro	Met	Leu	Pro	Asn	Thr	Tyr	Gln	Pro	Gln	Pro	Asp
		100						105				110			
Ser	Val	Tyr	Leu	Val	Pro	Thr	Pro	Ser	Lys	Ala	Gln	Gln	Gly	Leu	Tyr
	115					120						125			
Gln	Val	Pro	Gly	Pro	Ser	Pro	Gln	Phe	Gln	Ser	Pro	Pro	Ala	Lys	Gln
	130					135					140				
Thr	Ser	Thr	Phe	Ser	Lys	Gln	Thr	Pro	His	His	Pro	Phe	Pro	Ser	Pro
145					150				155					160	
Ala	Thr	Asp	Leu	Tyr	Gln	Val	Pro	Pro	Gly	Pro	Gly	Gly	Pro	Ala	Gln

```

      165      170      175
Asp Ile Tyr Gln Val Pro Pro Ser Ala Gly Met Gly His Asp Ile Tyr
      180      185      190
Gln Val Pro Pro Ser Met Asp Thr Arg Ser Trp Glu Gly Thr Lys Pro
      195      200      205
Pro Ala Lys Val Val Val Pro Thr Arg Val Gly Gln Gly Tyr Val Tyr
      210      215      220
Glu Ala Ala Gln Pro Glu Gln Asp Glu Tyr Asp Ile Pro Arg His Leu
225      230      235      240
Leu Ala Pro Gly Pro Gln Asp Ile Tyr Asp Val Pro Pro Val Arg Gly
      245      250      255
Leu Leu Pro Ser Gln Tyr Gly Gln Glu Val Tyr Asp Thr Pro Pro Met
      260      265      270
Ala Val Lys Gly Pro Asn Gly Arg Asp Pro Leu Leu Glu Val Tyr Asp
      275      280      285
Val Pro Pro Ser Val Glu Lys Gly Leu Pro Pro Ser Asn His His Ala
      290      295      300
Val Tyr Asp Val Pro Pro Ser Val Ser Lys Asp Val Pro Asp Gly Pro
305      310      315      320
Leu Leu Arg Glu Glu Thr Tyr Asp Val Pro Pro Ala Phe Ala Lys Ala
      325      330      335
Lys Pro Phe Asp Pro Ala Arg Thr Pro Leu Val Leu Gly Ala Pro Pro
      340      345      350
Pro Asp Ser Pro Pro Ala Glu Asp Val Tyr Tyr Val Pro Pro Pro Ala
      355      360      365
Pro Asp Leu Tyr Asp Val Pro Pro Gly Leu Arg Arg Pro Gly Pro Gly
      370      375      380
Thr Leu Tyr Asp Val Pro Arg Glu Arg Val Leu Pro Pro Glu Val Ala
385      390      395      400
Asp Gly Gly Val Val Asp Ser Gly Val Tyr Ala Val Pro Pro Pro Ala
      405      410      415
Glu Arg Glu Ala Pro Ala Glu Gly Lys Arg Leu Ser Ala Ser Ser Thr
      420      425      430
Gly Ser Thr Arg Ser Ser Gln Ser Ala Ser Ser Leu Glu Val Ala Gly
      435      440      445
Pro Gly Arg Glu Pro Leu Glu Leu Glu Val Ala Val Glu Ala Leu Ala
      450      455      460
Arg Leu Gln Gln Gly Val Ser Ala Thr Val Ala His Leu Leu Asp Leu
465      470      475      480
Ala Gly Ser Ala Gly Ala Thr Gly Gly Trp Arg Ser Pro Ser Glu Pro
      485      490      495
Gln Glu Pro Leu Val Gln Asp Leu Gln Ala Ala Val Ala Val Gln
      500      505      510
Ser Ala Val His Glu Leu Leu Glu Phe Ala Arg Ser Ala Val Gly Asn
      515      520      525
Ala Ala His Thr Ser Asp Arg Ala Leu His Ala Lys Leu Ser Arg Gln
      530      535      540
Leu Gln Lys Met Glu Asp Val His Gln Thr Leu Val Ala His Gly Gln
545      550      555      560
Ala Leu Asp Ala Gly Arg Gly Gly Ser Gly Ala Thr Leu Glu Asp Leu
      565      570      575
Asp Arg Leu Val Ala Cys Ser Arg Ala Val Pro Glu Asp Ala Lys Gln
      580      585      590
Leu Ala Ser Phe Leu His Gly Asn Ala Ser Leu Leu Phe Arg Arg Thr

```



```
<210> 3013
<211> 248
<212> DNA
<213> Homo sapiens
```

<210> 3014

<211> 82
 <212> PRT
 <213> Homo sapiens

<400> 3014
 Xaa Arg Val Lys Gly Thr Val Val Ile Phe Asp Glu Ala His Asn Val
 1 5 10 15
 Glu Lys Met Cys Glu Glu Ser Ala Ser Phe Asp Leu Thr Pro His Asp
 20 25 30
 Leu Ala Ser Gly Leu Asp Val Ile Asp Gln Val Leu Glu Glu Gln Thr
 35 40 45
 Lys Ala Ala Gln Gln Ala Gly Trp Gly Leu Leu Leu Ala Arg Arg Trp
 50 55 60
 Val Ala Pro Pro Arg Pro Thr Val Ile Leu Leu Arg Leu Glu Gly Ala
 65 70 75 80
 Ile Asp

<210> 3015
 <211> 438
 <212> DNA
 <213> Homo sapiens

<400> 3015
 ntgtatctct cctgtgtctt cacccaaaaa atgaaaacag ctattaaaca tacctggcct
 60
 gaagacggcc ccaaggcatt ctggggggagg gaatggaaag ctgcccaaca catctggtat
 120
 ccggagaagc attttcacaa ctaaacttga cctgaccag ctgcacggtg actgggtcca
 180
 ggaagatggg gtgaaccatc cctcctggga ccctgtgaca aaaggcaaaa gctcttgggc
 240
 aaagctgcc a ggggggcttg cggggggggg gtgtgcgggt gacattgtga tttggtagac
 300
 tttggtggaa gatgtttgga aactctggta ttgagggcca acagcacgtg ctcatgtggc
 360
 cttctgcttg cccatctgca gcagttcctg cgacctggga ggtgggag catccacagg
 420
 tgcaacagca acgggcta
 438

<210> 3016
 <211> 103
 <212> PRT
 <213> Homo sapiens

<400> 3016
 Met Ser Thr Cys Cys Trp Pro Ser Ile Pro Glu Phe Pro Asn Ile Phe
 1 5 10 15
 His Gln Ser Leu Pro Asn His Asn Val Thr Arg Thr Pro Pro Pro Arg
 20 25 30
 Lys Pro Pro Trp Gln Leu Cys Pro Arg Ala Phe Ala Phe Cys His Arg
 35 40 45
 Val Pro Gly Gly Met Val His Pro Ile Phe Leu Glu Pro Val Thr Val

50	55	60
Gln Leu Gly Gln Val Lys Phe Ser Cys Glu Asn Ala Ser Pro Asp Thr		
65	70	75
Arg Cys Val Gly Gln Leu Ser Ile Pro Ser Pro Arg Met Pro Trp Gly		80
	85	90
Arg Leu Gln Ala Arg Tyr Val		95
100		

<210> 3017
 <211> 4796
 <212> DNA
 <213> Homo sapiens

<400> 3017
 ncgaaaaccc ggagcagctg cgtacgctca tggacagtcc tccgaggggc gaagccgggc
 60
 agctgggcat gctcagtagc tgggggaggt ttgggtggag agtagaaagc tgtggctctg
 120
 cctctcatcc cctcccgtg gccccgccc cccttgcccc taccagcca gtagtagttc
 180
 cccagcgtgc gcccggggag accgggaaca tggcgctggg agcgctgtag cagctgagaa
 240
 ggggctgagg caccgcccgt tgcgtgacag ccggccacca gatgttcatg cattctagag
 300
 aaagtggaaa acttagaagc ctaattaatg actgtcttct ggacctctga gaccatgttt
 360
 ctagtgtttt ccgtggaata ttatcagaaa tacactgtgg tgaaatgctt ccacctcttg
 420
 ctaaaatgaa cactgaggaa aaatgaagaa gactgacaag caccagcgaa aagttgcaga
 480
 atagaaatag ccacactcct ctggagtctt taattcatcc acagccatca tataaaggtt
 540
 ttggcatcat gtttgggaag aaaaagaaaa agattgaaat atctggcccg tccaactttg
 600
 aacacagggt tcatactggg tttgatccac aagagcagaa gtttaccggc cttccccagc
 660
 agtggcacag cctgttagca gatacggcca acaggccaaa gcctatggtg gacccttcat
 720
 gcatcacacc catccagctg gtcctatga agacaatcgt tagaggaaac aaaccctgca
 780
 aggaaacctc catcaacggc ctgctagagg attttgaaa catctcgggtg actcgtcca
 840
 actccctaag gaaagaaagc ccaccacccc cagatcaggg agcctccagc cacggtccag
 900
 gccacgcgga agaaaatggc ttcatcacct tctcccagta tccagcgaa tccgatacta
 960
 ctgctgacta cacgaccgaa aagtacaggg agaagagtct ctatggagat gatctggatc
 1020
 cgtattatag aggcagccac gcagccaagc aaaatgggca cgtaatgaaa atgaagcacg
 1080
 gggaggccta ctattctgag gtgaagcctt tgaaatccga ttttgccaga ttttctgccg
 1140
 attatcactc acatttggac tcaactgagca aaccaagtga atacagtgac ctcaagtggg
 1200

agtatcagag agcctcgagt agtccccctc tggattattc attccaattc acaccttcta
1260
gaactgcagg gaccagcggg tgctccaagg agagcctggc gtacagtgaag agtgaatggg
1320
gaccagcct ggatgactat gacaggaggc caaagtcttc gtacctgaat cagacaagcc
1380
ctcagccac catgcggcag aggtccaggt caggctcggg actccaggaa ccgatgatgc
1440
catttggagc aagtgcattt aaaaccctc cccaaggaca ctctacaac tcctacacct
1500
accctcgctt gtccgagccc acaatgtgca ttccaaagggt ggattacgat ccagcacaga
1560
tggtcctcag ccctccactg tcagggtctg acacctacc caggggacct gccaaactac
1620
ctcaaagtca aagcaaactg ggctattcct caagcagtca ccagtaccg tctgggtacc
1680
acaaagccac cttgtaccat caccctccc tgcagagcag ttcgcagtac atctccacgg
1740
cttctacct gagctccctc agcctctcat ccagcatacc cgcgcccag ctggggctcc
1800
tcctccgacc agcagccctc cagggtgtcc catgaacagt ttcgggaggc cctgcagctg
1860
gtggtcagcc caggagaccc cagggaatac ttggccaact ttatcaaat cggggaaggc
1920
tcaaccggca tcgtatgcat cgccaccgag aaacacacag ggaaacaagt tgcagtgaag
1980
aaaatggacc tccggaagca acagagacga gaactgctt tcaatgaggt cgtgatcatg
2040
cgggattacc accatgacaa tgtggttgac atgtacagca gctacctgt cggcgatgag
2100
ctctgggtgg tcatggagtt tctagaagggt ggtgccttga cagacattgt gactcacacc
2160
agaatgaatg aagaacagat agctactgtc tgctgtcag ttctgagagc tctctctac
2220
cttcataacc aaggagtgat tcacaggagc ataaaaagt actccatcct cctgacaagg
2280
gatggccgga taaagtgtgc tgattttggt ttctgtgctc aagtttccaa agagggtgcc
2340
aagaggaaat cattgggttg cactccctac tggatggccc ctgaggtgat ttctaggcta
2400
ccttatggga cagaggtgga catctggctc ctgggatca tggatgata aatgattgat
2460
ggcgagcccc cctacttcaa tgagcctccc ctccaggcga tgcggaggat ccgggacagt
2520
ttacctcaa gagtgaagga cctacacaag gtttcttcag tgctccggg attcctagac
2580
ttgatgttg tgaggagcc ctctcagaga gcaacagccc aggaactcct cggacatcca
2640
ttcttaaaac tagcaggctc accgtcttgc atcgctcccc tcatgagaca atacaggcat
2700
cactgagcag aggattcgtg taggtggcaa agctagatga ggacatgaga ataattcagg
2760
agaacaaaag gaaacacaga acatgcaaaa ggctgtgca ttctagacca gccaatgggt
2820

gggacagcgt gatgaccggc agggttcaac agaccagggc atcttcttgt gtcttaaaca
2880
ggcatctctc cactgacagc cgggtgtggc acttggagca cggctttaat aagtcattat
2940
tatatttttc agcccttcat ccagcaaate agaaggactc agtacaaact ccgttatgat
3000
atatcctagc cacatgcagg gtaacatgta ggattttcta tattgaaaga atacttttct
3060
ggcaaaaaaa aaaaaaaaaa gaaagaaagg aaaacaaaaa gcactttttt cttaatggta
3120
gcagtataat gtattttgca acgaatttgt aatttttctg tacgatagtt ttgataattt
3180
atagtacttt gatgtcatgt agccattgta tcagttgaag taatacttgt ttactagagg
3240
agtttgaaca aagcctttcc tactttttta tccctttaag agaaccaatg attctttagg
3300
aactttgaat actgaatgac tctcaatcac cgtcagcttt agtaaaatct ctttcttate
3360
ctaacaagtg tcttatttgg tggaagaaga attaagagtg atggtgatgg tgtgcacggt
3420
tcattaatcc aaccaaaaat aatgaaataa aatttgagcc acagtatacc actccttggg
3480
ataaagttaa atatttttaa agatcacatt ttccatgaac gcctctagta gcaaaccatt
3540
cttttgcaca ccacaatgtt tccctcagtg ccccttctca aatgggtaca atgttccctt
3600
gtggccaaat ttccctccca gggagcaatt tcagtgctag gatcattgga ttcagttccc
3660
aaaatagaat gtttcagtga gaccatgaga attccaggct cacagagggga gaggagagaa
3720
cagggcaaga cgtttggttt catttgtcac catttttaaa actctgtatg ctagcacacc
3780
aaactcttgt ctatatttac ctttgtacca cagtattaat cgctattgtt catgtatcgt
3840
gctggaagtc tgaactgact ctagaggatg aattagcaag aggggtatttt accagggtatg
3900
atctgacttc agttgtgccc atgtttataat gtgtttccga cataggagag tctgtctgct
3960
gtctagatct tcttgaatgt tgataaaaaat gaatgactac tacaatacat tttgtgttgc
4020
ttgttggtatg aatttgcagt ttaactgtag gccaatatag atttgccttt aaaactctgg
4080
aagagctaca tagtcatcat tagtttctat taattatgca tcagacaaaa gccatttgtt
4140
accaaactgg gaaaacagag gcttttctta actatttcac atactgtaac aaatatgaat
4200
ttaaatttgt gatagcgctc tggttgctct aagcataatt aagaattttt gtaattaata
4260
ggttgcta at ttttatcac tgctaaaaag gaaaaaaggc ataaaatgac cttctactga
4320
ttagattttc agttttcttt caaactggaa atgcctccat aaatatgatc tatgattttg
4380
cttcataaaa cagcaaatca atgttttatg taaaatatta aagcattaat ataaatatgt
4440

gagaataaaa acaatctaaa tccagaaaat ggcagtccta aatgttcattg agacagattg
 4500
 tattaatttta accaggacta tgtagaagta gaaagaaaag aaaaagaaaa tcttttttaa
 4560
 accagaataa acattaaaaa ctattgcaga aaatagtggg ttttggattc caaacatttt
 4620
 cgacagtgtg atggaaattt ttctgttaatt ttcttaccat cgggtatttt ttaaagtatt
 4680
 cattgagttt accaaaagtt actgtagctt aaaagggttt gtgagcacta actattggca
 4740
 gaaactgcat ttgcaaataa aaataaatgt ttgcctttta aaaaaaaaaa aaaaaa
 4796

<210> 3018
 <211> 104
 <212> PRT
 <213> Homo sapiens

<400> 3018
 Cys His Leu Glu Gln Val His Leu Lys Pro Ile Pro Lys Asp Thr Pro
 1 5 10 15
 Thr Thr Pro Thr Pro Thr Leu Ala Cys Pro Ser Pro Gln Cys Ala Phe
 20 25 30
 Gln Arg Trp Ile Thr Ile Gln His Arg Trp Ser Ser Ala Leu His Cys
 35 40 45
 Gln Gly Leu Thr Pro Thr Pro Gly Ala Leu Pro Asn Tyr Leu Lys Val
 50 55 60
 Lys Ala Asn Arg Ala Ile Pro Gln Ala Val Thr Ser Thr Arg Leu Gly
 65 70 75 80
 Thr Thr Lys Pro Pro Cys Thr Ile Thr Pro Pro Cys Arg Ala Val Arg
 85 90 95
 Ser Thr Ser Pro Arg Leu Pro Thr
 100

<210> 3019
 <211> 882
 <212> DNA
 <213> Homo sapiens

<400> 3019
 ggcctagcca aaaggggagg ggcagcacgg cccgcggcgg gcgttcgctg gagctgggtg
 60
 accggggcggc tgaccgaggg ggcgacgcgc ggcggggcag accgctgggg actgcggggc
 120
 gcgctgtgtc cgtcgccatg acagatcaga cctattgtga ccgcctggtg caggacacgc
 180
 ctttcttgac aggccatggg cgcttgagtg agcagcaggt ggacaggatc atcctccagc
 240
 tgaaccgtta ctaccacag atccttacca acaaggaggc ggaaaagggtg ctgaggagtt
 300
 ccggaacccc aaggcatcct tgcgtgtgcg gctctgtgac ctctgagcc acctgcagcg
 360
 gagctgtgag cgggactgcc aggagttcta ccgagccctg tatatccatg cccagccct
 420

gcacagccgc ctgccagcc gccacgtctt gcagaactca gattgcacag agctagactc
 480
 gggcagccag agcggcgagc tgagtaacag gggacccatg agcttcctgg ctggcctggg
 540
 ccttgctgtg ggactggccc tgctcctgta ctgctatccg ccagacccca agggcctgcc
 600
 agggacccgg cgcgtcctcg gtttctcgcc tgtcatcatc gacagacatg tcagccgcta
 660
 cctgctggcc ttcctggcag atgacctagg ggggctctga cagaccctgg acccagggcc
 720
 tcacctgcca ctcaaccaa gagtcctcga gccggcccgcc caaggggact gctgcttctt
 780
 tttctaaatg catatttttc attatttata atttgtgtaa aaaacacacc ttcaccttac
 840
 aaggtgctga ccatattaaa tgttcagggt ctctcaaaaa aa
 882

<210> 3020

<211> 58

<212> PRT

<213> Homo sapiens

<400> 3020

Gln	Gly	Thr	His	Glu	Leu	Pro	Gly	Trp	Pro	Gly	Pro	Cys	Cys	Gly	Thr
1				5				10						15	
Gly	Pro	Ala	Pro	Val	Leu	Leu	Ser	Ala	Arg	Pro	Gln	Gly	Pro	Ala	Arg
			20					25					30		
Asp	Pro	Ala	Arg	Pro	Arg	Phe	Leu	Ala	Cys	His	His	Arg	Gln	Thr	Cys
			35				40					45			
Gln	Pro	Leu	Pro	Ala	Gly	Leu	Pro	Gly	Arg						
			50				55								

<210> 3021

<211> 1008

<212> DNA

<213> Homo sapiens

<400> 3021

ntgtacatac agtacggaat gacttcagat tctgaaaaaa ggcaaatctg accaattgag
 60
 gcagaaagca ggtcagtggt tccccaggtc tggaactggg gtgggttact gatagcaa
 120
 gggcatgtgg gtgccttggg gtagggtaaa ggttccatct tgatcgcggt ggtgtttccc
 180
 aagtgtatac actcacaaa actatactta gaactcaaaa ctcgccaaat atatacttaa
 240
 aatggatgca gttgggttat tataaattat acctcaataa agttgattaa aaacatcaat
 300
 tcctcagaaa attcttttct gaccactccc ctctcagacg aggtcggggc tcttggtatg
 360
 catacccata ccactacaa cctgtattta ttttttttga aacatggtct ctttctgtcg
 420
 tccaggctgg agtgcagtg cgcaatcatg gatcactgca gccttgacct tcttggtca
 480

agtgatcctc ccggctcacc cccagtagct ggaaccacag gcgcgcttcc acaccggaaa
 540
 gcccatcttc tagaggcgga aaccgaagcg cccagtggga aaggcgaccc gccggggatg
 600
 cgggggtgctc aacgcgctgc cacctggggc ccaacgcgtt gacctcgcgg tcagggttgc
 660
 tccgcggaact acggttctgg ctgctagct ctggaaggga gcaccgggag ggaatggtgg
 720
 caactcccaa ggaggggacc cagggatccg agaaagggaag acttggggta ggtgggggtg
 780
 gattttgact ggagagaaga aagggtcagg agtgcagggc gggtagcttg ggagctgcgt
 840
 ggactcgcg agacgggaag caggcgctg ctggcggtga cctggggccg gagaggaacg
 900
 ctgggtcccc tccttgggag ttgccaccat tccctcccgg tgctcccttc cagagctagc
 960
 gagccagaac cgtagtccgc ggaacaacct gaccgcgagt caacgcgt
 1008

<210> 3022

<211> 94

<212> PRT

<213> Homo sapiens

<400> 3022

Met	His	Thr	His	Thr	His	Tyr	Asn	Leu	Tyr	Leu	Phe	Phe	Leu	Lys	His
1			5						10					15	
Gly	Leu	Phe	Leu	Ser	Ser	Arg	Leu	Glu	Cys	Ser	Gly	Ala	Ile	Met	Asp
			20					25					30		
His	Cys	Ser	Leu	Asp	Leu	Pro	Gly	Ser	Ser	Asp	Pro	Pro	Gly	Ser	Pro
		35					40					45			
Pro	Val	Ala	Gly	Thr	Thr	Gly	Ala	Leu	Pro	His	Arg	Lys	Ala	His	Phe
	50					55					60				
Leu	Glu	Ala	Glu	Thr	Glu	Ala	Pro	Ser	Gly	Lys	Gly	Asp	Pro	Pro	Gly
65					70					75				80	
Met	Arg	Gly	Ala	Gln	Arg	Ala	Ala	Thr	Trp	Gly	Pro	Thr	Arg		
				85					90						

<210> 3023

<211> 1834

<212> DNA

<213> Homo sapiens

<400> 3023

ngctaagtta taccatgcta gcacagcaaa tggagagagc agagcaatca aaatttataa
 60
 aacttctatt ttggtgttca aagatcgagg taaatatgta agtggagaat tcaggtaagt
 120
 tcagattttt ccttcaggtt ggtttaattt ctatttccta aaacattaaa ataataatgg
 180
 aatgattgaa ataataaaca tttttcttat tcaagatttc gtcattggcta ttgtaaagga
 240
 aaccctagga aaatggtgaa aacttgggca gaaaaagaaa tgaggaactt aatcaggcta
 300

aacacagcag agataccatg tccagaacca ataatgctaa gaagtcatgt tcttgatcatg
360
agtttcatcg gtaaagatga catgcctgca ccaactcttga aaaatgtcca gttatcagaa
420
tccaaggctc gggagttgta cctgcaggtc attcagtaca tgagaagaat gtatcaggat
480
gccagacttg tccatgcaga tctcagtga tttaacatgc tgtaccacgg tggaggcgtg
540
tatatcattg acgtgtctca gtccgtggag cagcaccacc cacatgcctt ggagttcttg
600
agaaaggatt gcgccaacgt caatgatttc tttatgaggc acagtgttgc tgtcatgact
660
gtgcgggagc tctttgaatt tgtcacagat ccatccatta cacatgagaa catggatgct
720
tatctctcaa aggccatgga aatagcatct caaaggacca aggaagaacg gtctagccaa
780
gatcatgtgg atgaagaggt gtttaagcga gcatatattc ctagaacctt gaatgaagtg
840
aaaaattatg agagggatat ggacataatt atgaaattga aggaagagga catggccatg
900
aatgcccac aagataatat tctaccagac tggtacagga ttgaagaaag atttgtcagg
960
agttcagaag gtccctgcac tctagaaaat caagtggagg aaaggacttg ttctgattca
1020
gaagatatg gaagctctga gtgctctgac acagactctg aagagcaggg agaccatgcc
1080
cgccccaaaga aacacaccac ggaccctgac attgataaaa aagaaagaaa aaagatggtc
1140
aaggaagccc agagagagaa aagaaaaaac aaaattccta aacatgtgaa aaaaagaaag
1200
gagaagacag ccaagacgaa aaaaggcaaa tagaatgaga accatattat gtacagtcac
1260
tttctcagt tctttttctc gcctgaactc ttaagctgca tctggaagat ggcttattgg
1320
ttttaaccag attgtcatcg tggcactgtc tgtgaagacg gattcaaag ttttcatgta
1380
actatgtaaa aagctctaag ctctagagtc tagatccagt cactgactct gtctgggtgt
1440
gacagaggat ttatttaagc tattatttta ataaagaact ttgtacattt ttatttttat
1500
atTTTTTtct cttacaaata tgtttttgga agcatgataa atgtttaaat gtagtcaaca
1560
tctgtaactc ttacatgagt gtccagaggc actcatggga aaattgggtt tgctttcttt
1620
gtacacacca gagaccatc tgaggtcac tgattataag gccatgttta tataaaggga
1680
atttcaccca cagttcagct ggctgttgat tttcactgca actctgcctt tgtgtgtatt
1740
ggcgatcatt tgtaatgctc ttacacttcg tctttaatgt tctttttgga gttaggacct
1800
ctcagttcat aaagtttttt acaattcaaa aaaa
1834

<210> 3024

<211> 347
 <212> PRT
 <213> Homo sapiens

<400> 3024

```

Asn Asn Lys His Phe Ser Tyr Ser Arg Phe Arg His Gly Tyr Cys Lys
 1           5           10           15
Gly Asn Pro Arg Lys Met Val Lys Thr Trp Ala Glu Lys Glu Met Arg
      20           25           30
Asn Leu Ile Arg Leu Asn Thr Ala Glu Ile Pro Cys Pro Glu Pro Ile
      35           40           45
Met Leu Arg Ser His Val Leu Val Met Ser Phe Ile Gly Lys Asp Asp
      50           55           60
Met Pro Ala Pro Leu Leu Lys Asn Val Gln Leu Ser Glu Ser Lys Ala
      65           70           75           80
Arg Glu Leu Tyr Leu Gln Val Ile Gln Tyr Met Arg Arg Met Tyr Gln
      85           90           95
Asp Ala Arg Leu Val His Ala Asp Leu Ser Glu Phe Asn Met Leu Tyr
      100          105          110
His Gly Gly Gly Val Tyr Ile Ile Asp Val Ser Gln Ser Val Glu His
      115          120          125
Asp His Pro His Ala Leu Glu Phe Leu Arg Lys Asp Cys Ala Asn Val
      130          135          140
Asn Asp Phe Phe Met Arg His Ser Val Ala Val Met Thr Val Arg Glu
      145          150          155          160
Leu Phe Glu Phe Val Thr Asp Pro Ser Ile Thr His Glu Asn Met Asp
      165          170          175
Ala Tyr Leu Ser Lys Ala Met Glu Ile Ala Ser Gln Arg Thr Lys Glu
      180          185          190
Glu Arg Ser Ser Gln Asp His Val Asp Glu Glu Val Phe Lys Arg Ala
      195          200          205
Tyr Ile Pro Arg Thr Leu Asn Glu Val Lys Asn Tyr Glu Arg Asp Met
      210          215          220
Asp Ile Ile Met Lys Leu Lys Glu Glu Asp Met Ala Met Asn Ala Gln
      225          230          235          240
Gln Asp Asn Ile Leu Pro Asp Cys Tyr Arg Ile Glu Glu Arg Phe Val
      245          250          255
Arg Ser Ser Glu Gly Pro Cys Thr Leu Glu Asn Gln Val Glu Glu Arg
      260          265          270
Thr Cys Ser Asp Ser Glu Asp Ile Gly Ser Ser Glu Cys Ser Asp Thr
      275          280          285
Asp Ser Glu Glu Gln Gly Asp His Ala Arg Pro Lys Lys His Thr Thr
      290          295          300
Asp Pro Asp Ile Asp Lys Lys Glu Arg Lys Lys Met Val Lys Glu Ala
      305          310          315          320
Gln Arg Glu Lys Arg Lys Asn Lys Ile Pro Lys His Val Lys Lys Arg
      325          330          335
Lys Glu Lys Thr Ala Lys Thr Lys Lys Gly Lys
      340          345

```

<210> 3025
 <211> 1370
 <212> DNA
 <213> Homo sapiens

<400> 3025

nnacgcgtgc ccagacagga tggctttttc gggaagataa aacacattag atggatcact
60
tcaagagaag ataaaaattg aaactgctaa tcatctagta ctactgctaa gccgctccaa
120
agctttctgaa gcatctaggt gatctttctta aatctttgac aggaaagagt aggaaacttt
180
ttggcagact tttacctggt gaatggactt gttttagaat caaggaaaag aagagaacat
240
ctcagtgaag aggatattct tcgaaataag gccatcatgg agagtttgag taaaggtgga
300
aacataatgg aacagaattt tgagccgatt cgaagacagt ctcttacacc tcctcctcag
360
aacactatta catgggaaga atatatatct gctgaaaatg gaaaagctcc tcatctgggt
420
agagaattgg tgtgcaaaga gagtaagaaa acgttttaaag ctacgatagc catgagccag
480
gaatttcctt tagggataga gttattattg aatgttttag aagtagtagc tcccttcaag
540
cactttaaca agcttagaga atttgttcag atgaagcttc ctccaggctt tcctgtaaaa
600
ttagatatac ctgtgtttcc cacaatcaca gccactgtga cttttcagga gtttcgatac
660
gatgaatttg atggctccat ctttactata cctgatgact acaaggaaga cccaagccgt
720
tttctgatc ttttaactgac gtggaaaagg atgccgtcta accaaggaaa gaaaatacag
780
agaccctaga agtggatcca aatagaaggg acaaatgctt tcagtgaaga aaagggaatt
840
acacattgaa tcgacacatc agtaatacga tacagtgaag tgggcctcta ataagaattt
900
cagcgagttt tctgatgtgc cattttttgt ctttttaaaa atatacatat tataaatgta
960
atagtttgac acattaatga ccctaagacc tgcgtatgtg aagcagctat gagtgtgtg
1020
atttgttttt aaaaattttt acacttcttg ttgaaatata tatgcatata aatatatcta
1080
tatctatata tatatctaaa acactcctgg accattaacg taaattaaat gtcttaagag
1140
atatggagcc ctttttaaact tgtcatcttt atgcaagggt acatttataa atattccttc
1200
gagctttgtt ttcataaaat gtaaactatg taacattatg tatagttcag taatttgaat
1260
gtttgttcaa tataatgaac tagaaggaat gcaattttct gtagatgaat gaaccaaag
1320
gtaaccatta aacaattgca tttaaaaaaa aaaaaaaaaa aaaaaaaaaa
1370

<210> 3026

<211> 152

<212> PRT

<213> Homo sapiens

<400> 3026

```

Met Glu Ser Leu Ser Lys Gly Gly Asn Ile Met Glu Gln Asn Phe Glu
 1           5           10           15
Pro Ile Arg Arg Gln Ser Leu Thr Pro Pro Pro Gln Asn Thr Ile Thr
      20           25           30
Trp Glu Glu Tyr Ile Ser Ala Glu Asn Gly Lys Ala Pro His Leu Gly
      35           40           45
Arg Glu Leu Val Cys Lys Glu Ser Lys Lys Thr Phe Lys Ala Thr Ile
      50           55           60
Ala Met Ser Gln Glu Phe Pro Leu Gly Ile Glu Leu Leu Leu Asn Val
      65           70           75           80
Leu Glu Val Val Ala Pro Phe Lys His Phe Asn Lys Leu Arg Glu Phe
      85           90           95
Val Gln Met Lys Leu Pro Pro Gly Phe Pro Val Lys Leu Asp Ile Pro
      100           105           110
Val Phe Pro Thr Ile Thr Ala Thr Val Thr Phe Gln Glu Phe Arg Tyr
      115           120           125
Asp Glu Phe Asp Gly Ser Ile Phe Thr Ile Pro Asp Asp Tyr Lys Glu
      130           135           140
Asp Pro Ser Arg Phe Pro Asp Leu
      145           150

```

<210> 3027

<211> 1154

<212> DNA

<213> Homo sapiens

<400> 3027

```

nccgtttttcc cgtcgcacgt ggtggccact gttggcttct gaatggtttg caaggcggat
60
atccacgccca aggccttttg atcgccgtg ggtacatccg tctgagccgt tcctttccat
120
cgcagacggc ggcctccgcg gcgctctcca gtcattggact accggcggct tctcatgagc
180
cgggtggtcc cggggcaatt cgacgacgcg gactcctctg acagtgaaaa cagagacttg
240
aagacagtca aagagaagga tgacattctg tttgaagacc ttcaagacaa tgtgaatgag
300
aatggtgaag gtgaaataga agatgaggag gaggagggtt atgatgatga tgatgatgac
360
tgggactggg atgaaggagt tggaaaactc gccaaagggt atgtctggaa tggaggaagc
420
aaccacagg caaatcgaca gacctccgac agcagttcag ccaaaatgtc tactccagca
480
gacaaggctt tacggaaatt tgagaataaa attaatttag ataagctaaa tgttactgat
540
tccgtcataa ataaagtcac cgaaaagtct agacaaaagg aagcagatat gtatcgcac
600
aaagataagg cagacagagc aactgtagaa cagggtgttg atcccagaac aagaatgatt
660
ttattcaaga tgttgactag aggaatcata acagagataa atggctgcat tagcacagga
720
aaagaagcta atgtatacca tgctagcaca gcaaatggag agagcagagc aatcaaaatt
780

```

tataaaaactt ctatttttgggt gttcaaagat cgggataaat atgtaagtgg agaattcaga
 840
 ttttcgtcatg gctattgttaa aggaaaccct aggaaaatgg tgaaaacttg ggcagaaaaa
 900
 gaaatgagga acttaatcag gctaaacaca gcagagatac catgtccaga accaataatg
 960
 ctaagaagtc atgttcttgt catgagtttc atcggtaaag atgacatttc ttttcattca
 1020
 aggccctgcac cactcttgaa aaatgtccag ttatcagaat ccaaggctcg ggagttgtac
 1080
 ctgcaggtca ttcagtacat gagaagaatg tatcaggatg ccagacttgt ccatgcagat
 1140
 cgtcggtgag aggc
 1154

<210> 3028

<211> 331

<212> PRT

<213> Homo sapiens

<400> 3028

Met	Asp	Tyr	Arg	Arg	Leu	Leu	Met	Ser	Arg	Val	Val	Pro	Gly	Gln	Phe
1				5				10					15		
Asp	Asp	Ala	Asp	Ser	Ser	Asp	Ser	Glu	Asn	Arg	Asp	Leu	Lys	Thr	Val
		20					25					30			
Lys	Glu	Lys	Asp	Asp	Ile	Leu	Phe	Glu	Asp	Leu	Gln	Asp	Asn	Val	Asn
		35				40					45				
Glu	Asn	Gly	Glu	Gly	Glu	Ile	Glu	Asp	Glu	Glu	Glu	Gly	Tyr	Asp	
	50				55					60					
Asp	Asp	Asp	Asp	Asp	Trp	Asp	Trp	Asp	Glu	Gly	Val	Gly	Lys	Leu	Ala
65				70				75						80	
Lys	Gly	Tyr	Val	Trp	Asn	Gly	Gly	Ser	Asn	Pro	Gln	Ala	Asn	Arg	Gln
			85				90						95		
Thr	Ser	Asp	Ser	Ser	Ser	Ala	Lys	Met	Ser	Thr	Pro	Ala	Asp	Lys	Val
		100				105						110			
Leu	Arg	Lys	Phe	Glu	Asn	Lys	Ile	Asn	Leu	Asp	Lys	Leu	Asn	Val	Thr
	115					120						125			
Asp	Ser	Val	Ile	Asn	Lys	Val	Thr	Glu	Lys	Ser	Arg	Gln	Lys	Glu	Ala
	130				135					140					
Asp	Met	Tyr	Arg	Ile	Lys	Asp	Lys	Ala	Asp	Arg	Ala	Thr	Val	Glu	Gln
145					150				155					160	
Val	Leu	Asp	Pro	Arg	Thr	Arg	Met	Ile	Leu	Phe	Lys	Met	Leu	Thr	Arg
		165					170						175		
Gly	Ile	Ile	Thr	Glu	Ile	Asn	Gly	Cys	Ile	Ser	Thr	Gly	Lys	Glu	Ala
	180					185						190			
Asn	Val	Tyr	His	Ala	Ser	Thr	Ala	Asn	Gly	Glu	Ser	Arg	Ala	Ile	Lys
	195					200						205			
Ile	Tyr	Lys	Thr	Ser	Ile	Leu	Val	Phe	Lys	Asp	Arg	Asp	Lys	Tyr	Val
	210				215						220				
Ser	Gly	Glu	Phe	Arg	Phe	Arg	His	Gly	Tyr	Cys	Lys	Gly	Asn	Pro	Arg
225					230				235					240	
Lys	Met	Val	Lys	Thr	Trp	Ala	Glu	Lys	Glu	Met	Arg	Asn	Leu	Ile	Arg
		245					250						255		
Leu	Asn	Thr	Ala	Glu	Ile	Pro	Cys	Pro	Glu	Pro	Ile	Met	Leu	Arg	Ser

```

                260                265                270
His Val Leu Val Met Ser Phe Ile Gly Lys Asp Asp Ile Ser Phe His
                275                280                285
Ser Arg Pro Ala Pro Leu Leu Lys Asn Val Gln Leu Ser Glu Ser Lys
                290                295                300
Ala Arg Glu Leu Tyr Leu Gln Val Ile Gln Tyr Met Arg Arg Met Tyr
305                310                315                320
Gln Asp Ala Arg Leu Val His Ala Asp Arg Arg
                325                330

```

<210> 3029

<211> 344

<212> DNA

<213> Homo sapiens

<400> 3029

```

acgcgtgatg cacggaaggg ccttcgggtt ttgcattttc cttatctgct gaccttacag
60
ctgaaaagat tcgattttga ttatacaacc atgcatagga ttaaactgaa tgatcgaatg
120
acatttcccg aggaactaga tatgagtact tttattgatg ttgaagatga aaaatctcct
180
cagactgaaa gttgcactga caggggagca gaaaatgaag gtagttgtca cagtgatcag
240
atgagcaacg atttctccaa tgatgatggt gttgatgaag gaatctgttt tgaaaccaat
300
agtggaactg aaaagatctc aaaatctgga cctgaaaaga attc
344

```

<210> 3030

<211> 114

<212> PRT

<213> Homo sapiens

<400> 3030

```

Thr Arg Asp Ala Arg Lys Gly Leu Arg Phe Leu His Phe Pro Tyr Leu
1          5          10          15
Leu Thr Leu Gln Leu Lys Arg Phe Asp Phe Asp Tyr Thr Thr Met His
20          25          30
Arg Ile Lys Leu Asn Asp Arg Met Thr Phe Pro Glu Glu Leu Asp Met
35          40          45
Ser Thr Phe Ile Asp Val Glu Asp Glu Lys Ser Pro Gln Thr Glu Ser
50          55          60
Cys Thr Asp Arg Gly Ala Glu Asn Glu Gly Ser Cys His Ser Asp Gln
65          70          75          80
Met Ser Asn Asp Phe Ser Asn Asp Asp Gly Val Asp Glu Gly Ile Cys
85          90          95
Phe Glu Thr Asn Ser Gly Thr Glu Lys Ile Ser Lys Ser Gly Pro Glu
100         105         110
Lys Asn

```

<210> 3031

<211> 567

<212> DNA

<213> Homo sapiens

<400> 3031

gctgaagaag cggaggatca tggacgcac cccgaccctg atgattttgt gccgcctgtg
 60
 cctccccctt cctattttgc cacgttttac tcgtgcacac cccggatgaa ccgcagattg
 120
 gttggtcctg atgttattcc cctgccacac atctacggag ctcgaatcaa aggtgtggaa
 180
 gtgttctgtc ctctggatcc cccgccgcca tatgaagctg tggtgagcca gatggaccag
 240
 gagcagggat cttcattcca aatgtcagaa ggatcagaag ctgctgtgat cccattggat
 300
 ctgggctgca cacaagtgc tcaagatggg gacattccta acatacctgc cgaagaaaat
 360
 gcatccacct caactcccag ttcaaccctg gtgcgtccta tcagaagccg gagagccctc
 420
 ccacccttga ggaccaggtc gaagagtgc cctgtgctcc atccttctga ggagagagct
 480
 gccccagtgc tcagctgtga agctgcaaca cagactgaaa ggagactgga tctggctgca
 540
 gtgactctga ggagaggctt gagatct
 567

<210> 3032

<211> 189

<212> PRT

<213> Homo sapiens

<400> 3032

Ala	Glu	Glu	Ala	Glu	Asp	His	Gly	Arg	Ile	Pro	Asp	Pro	Asp	Asp	Phe
1				5				10						15	
Val	Pro	Pro	Val	Pro	Pro	Pro	Ser	Tyr	Phe	Ala	Thr	Phe	Tyr	Ser	Cys
			20					25					30		
Thr	Pro	Arg	Met	Asn	Arg	Arg	Leu	Val	Gly	Pro	Asp	Val	Ile	Pro	Leu
			35				40					45			
Pro	His	Ile	Tyr	Gly	Ala	Arg	Ile	Lys	Gly	Val	Glu	Val	Phe	Cys	Pro
			50			55					60				
Leu	Asp	Pro	Pro	Pro	Pro	Tyr	Glu	Ala	Val	Val	Ser	Gln	Met	Asp	Gln
65					70				75					80	
Glu	Gln	Gly	Ser	Ser	Phe	Gln	Met	Ser	Glu	Gly	Ser	Glu	Ala	Ala	Val
			85					90						95	
Ile	Pro	Leu	Asp	Leu	Gly	Cys	Thr	Gln	Val	Thr	Gln	Asp	Gly	Asp	Ile
			100					105					110		
Pro	Asn	Ile	Pro	Ala	Glu	Glu	Asn	Ala	Ser	Thr	Ser	Thr	Pro	Ser	Ser
			115				120					125			
Thr	Leu	Val	Arg	Pro	Ile	Arg	Ser	Arg	Arg	Ala	Leu	Pro	Pro	Leu	Arg
			130			135					140				
Thr	Arg	Ser	Lys	Ser	Asp	Pro	Val	Leu	His	Pro	Ser	Glu	Glu	Arg	Ala
145					150				155					160	
Ala	Pro	Val	Leu	Ser	Cys	Glu	Ala	Ala	Thr	Gln	Thr	Glu	Arg	Arg	Leu
			165					170						175	
Asp	Leu	Ala	Ala	Val	Thr	Leu	Arg	Arg	Gly	Leu	Arg	Ser			

180

185

<210> 3033
 <211> 821
 <212> DNA
 <213> Homo sapiens

<400> 3033
 nnacgcgtga aggggggaaaa tgacaagaca gacttggatg ttatacgaga aaatcataga
 60
 ttcctatgga atgaggagga cgaaatggac atgacttggg agaagagact tgctaagaaa
 120
 tactatgata aattatttaa ggaatactgc atagcagatc tcagtaaata taaagaaaat
 180
 aagtttggat ttaggtggcg agtagaaaaa gaagtaattt caggaaaagg tcaatttttc
 240
 tgtggaaata aatattgtga taaaaaagaa ggcttaaaga gttgggaagt taattttggt
 300
 tatattgagc atggtgagaa gagaaatgca cttgttaaata taagggttatg ccaagaatgt
 360
 tccattaaat taaatttcca tcacaggaga aaagaaatca agtcaaaaaa aagaaaagat
 420
 aaaacaaaaa aagactgtga agagtcatca cataaaaaat ccagattatc ttctgcagaa
 480
 gaggcctcca agaaaaaaga taaaggacat tcattcttcaa agaaatctga agattctcta
 540
 cttagaaact ctgatgagga agaaagtgtc tcagaatctg aactttggaa ggggtccacta
 600
 ccagagacag atgaaaaatc acaggaagaa gaatttgatg agtattttca ggatttggtt
 660
 ctatgagacg agagagagaa gcctccgctc cttaatgtga aacttcatga agttttaaac
 720
 ctcattgcaat ttgaaattcc atctacgtct ttatctgcaa gttacagctt ctgtgctttg
 780
 tcttcgcaac tacaaatcca gggtctctca gcaacaacac a
 821

<210> 3034
 <211> 221
 <212> PRT
 <213> Homo sapiens

<400> 3034
 Xaa Arg Val Lys Gly Glu Asn Asp Lys Thr Asp Leu Asp Val Ile Arg
 1 5 10 15
 Glu Asn His Arg Phe Leu Trp Asn Glu Glu Asp Glu Met Asp Met Thr
 20 25 30
 Trp Glu Lys Arg Leu Ala Lys Lys Tyr Tyr Asp Lys Leu Phe Lys Glu
 35 40 45
 Tyr Cys Ile Ala Asp Leu Ser Lys Tyr Lys Glu Asn Lys Phe Gly Phe
 50 55 60
 Arg Trp Arg Val Glu Lys Glu Val Ile Ser Gly Lys Gly Gln Phe Phe
 65 70 75 80
 Cys Gly Asn Lys Tyr Cys Asp Lys Lys Glu Gly Leu Lys Ser Trp Glu

				85					90					95					
Val	Asn	Phe	Gly	Tyr	Ile	Glu	His	Gly	Glu	Lys	Arg	Asn	Ala	Leu	Val				
			100					105					110						
Lys	Leu	Arg	Leu	Cys	Gln	Glu	Cys	Ser	Ile	Lys	Leu	Asn	Phe	His	His				
		115					120					125							
Arg	Arg	Lys	Glu	Ile	Lys	Ser	Lys	Lys	Arg	Lys	Asp	Lys	Thr	Lys	Lys				
		130					135					140							
Asp	Cys	Glu	Glu	Ser	Ser	His	Lys	Lys	Ser	Arg	Leu	Ser	Ser	Ala	Glu				
145						150				155					160				
Glu	Ala	Ser	Lys	Lys	Lys	Asp	Lys	Gly	His	Ser	Ser	Ser	Lys	Lys	Ser				
			165					170					175						
Glu	Asp	Ser	Leu	Leu	Arg	Asn	Ser	Asp	Glu	Glu	Glu	Ser	Ala	Ser	Glu				
		180						185					190						
Ser	Glu	Leu	Trp	Lys	Gly	Pro	Leu	Pro	Glu	Thr	Asp	Glu	Lys	Ser	Gln				
		195					200					205							
Glu	Glu	Glu	Phe	Asp	Glu	Tyr	Phe	Gln	Asp	Leu	Phe	Leu							
		210					215					220							

<210> 3035

<211> 878

<212> DNA

<213> Homo sapiens

<400> 3035

```

ctcgaggaag atggcctcag accacaggat acctataatt cagaaacaaa gaacaaagat
60
ttgcactcca gcctctggtt ccggaaaggt gcccagccta cagattctaa cccgggacgt
120
cctcagacca cgacaggggc ctccacaca cggctcgcag aacctgtgca aggagaacca
180
caaaggatga gcactctggc ccacccaaaa ccatggcagc cctgagggca cagactggac
240
acctgcaga gtctcactct gtcattcagg gtggagtgca atggcgcaat ctcagctcac
300
tgcaacctcc cactcccggg ctcaagcaat tctcctgacc cacactcagg cccagctcct
360
tcccagactg tcattcctct tctagaagga aacagggacc ctgggggtcg gggatggccc
420
tgagctccct gctgtgcccc acacctggcg ggtctttgcc cacatgtgcc tagagtctgc
480
atgctctgcc ccatggctac ccgctgctgc ctgcaagggt ccagagtcac gtccccagt
540
agtctctgac ccggcggcca gcacaccagt gtgaatcacg tgtgtcccca gtgagtctct
600
gacccggcgg ccagcgcacc agtgtgaatc acatgcgtcc ccagtgagtc tctgaccgg
660
cgaccagagc accagtgtga atcacatgcg tccccggtga gtctctgcag ggtgtccagt
720
ctgtgccctc agggctgcca tggttttggg tgggcccagag tgctcatcct ttgtggttct
780
ccttgacaaa gttctgcgag ccattgtgtg gaggccctg tctgtgtctg aggacgtccc
840
gggttagaat ctgtaggctg ggcaccttc gggaaccg
878

```

<210> 3036
 <211> 65
 <212> PRT
 <213> Homo sapiens

<400> 3036
 Gly His Arg Leu Asp Thr Leu Gln Ser Leu Thr Leu Ser Phe Arg Val
 1 5 10 15
 Glu Cys Asn Gly Ala Ile Ser Ala His Cys Asn Leu Pro Leu Pro Gly
 20 25 30
 Ser Ser Asn Ser Pro Asp Pro His Ser Gly Pro Ala Pro Ser Gln Thr
 35 40 45
 Val Ile Leu Phe Leu Glu Gly Asn Arg Asp Pro Gly Gly Arg Gly Trp
 50 55 60
 Pro
 65

<210> 3037
 <211> 3538
 <212> DNA
 <213> Homo sapiens

<400> 3037
 nntctagaaa ttaatgatga caccttagaa ttagagggtg gagatgaagc tgaagatctt
 60
 acaaagaaac ttcttgatga acaagaacaa gaagatgagg aagccagcac tggatctcat
 120
 ctcaagctca tagtagatgc tttcctacag cagttaccca actgtgtcaa ccgagatctg
 180
 atagacaagg cagcaatgga tttttgcatg aacatgaaca caaaagcaaa caggaagaag
 240
 ttggtacggg cactcttcat agttcctaga caaagggttg atttgctacc attttatgca
 300
 agattgggtg ctacattgca tccctgcatg tctgatgtag cagaggatct ttgttccatg
 360
 ctgagggggg atttcagatt tcatgtacgg aaaaaggacc agatcaatat tgaaacaaag
 420
 aataaaaactg ttcgttttat aggagaacta actaagttaa agatgttcac caaaaatgac
 480
 aactgcatt gtttaaagat gtttctgtca gacttctctc atcaccatat tgaaatggca
 540
 tgcaccctgc tggagacatg tggacggttt cttttcagat ctccagaatc tcacctgagg
 600
 accagtgtac ttttggagca aatgatgaga aagaagcaag caatgcatct tgatgcgaga
 660
 tacgtcacia tggtagagaa tgcattatc tactgcaacc cacctccagc tgaaaaaacc
 720
 gtgaaaaaga aacgtcctcc tctccaggaa tatgtccgga aacttttgta caaggatctc
 780
 tctaagggtta ccaccgagaa ggttttgaga cagatgcaaa agctgccttg gcaggaccaa
 840
 gaagtgaag actatgttat ttgttgatg ataaacatct ggaatgtgaa atataatagt
 900

attcattgtg tagccaacct cttagcagga ctagtgctct accaagagga tgttgggagc
960
cacgttgtgg atggagtgtt agaagatatt cgattaggaa tggagggttaa tcaacctaaa
1020
tttaatcaga ggcgcacag cagtgccaaag ttcttaggag aactttacaa ttaccgaatg
1080
gtggaatcag ctgttatttt cagaactctg tattctttta cctcatttgg tgttaatcct
1140
gatggctctc caagttccct ggacccacct gagcatcttt tcagaattag actcgtatgc
1200
actattctgg acacatgtgg ccagtacttt gacagagggt ccagtaaacg aaaacttgat
1260
tgtttccttg tatattttca gcgttatgtt tggtggaaga aaagtttggg ggtttggaca
1320
aaagaccatc catttcctat tgatatagat tacatgatca gtgatacact agaactgcta
1380
agaccaaaga tcaaactctg taattctctg gaagaatcca tcaggcaggt acaagacttg
1440
gaacgagaat tcttaataaa actaggccta gtaaatagaca aagactcaaa agattttatg
1500
acagaaggag aaaatcttga agaggatgaa gaagaagaag aagggtggggc tgaacagaa
1560
gaacaatctg gaaatgaaag tgaagtaaag gagccagaag aagaggaggg ttctgataat
1620
gatgatgatg agggagaaga agaggaggaa gagaatacag attaccttac agattccaat
1680
aaggaaaatg aaaccgatga agagaatact gaggtaatga ttaaaggcgg tggacttaag
1740
catgtacctt gtgtagaaga tgaggacttc attcaagctc tggataaaat gatgctagaa
1800
aatctacagc aacgaagtgg tgaatctgtt aaagtgcacc aactagatgt tgccattcct
1860
ttgcatctca aaagccagct gaggaaaggg cccccactgg gaggtgggga aggagaggct
1920
gagtctgcag acacaatgcc gtttgtcatg ttaacaagaa aaggcaataa acagcagttt
1980
aagatcctta atgtacccat gtccctctca cttgctgcaa atcactggaa ccagcaacag
2040
gcagaacaag aagagaggat gagaatgaaa aagctcacac tagatatcaa tgaacggcaa
2100
gaacaagaag attatcaaga aatgttgcag tctcttgac agcgccagc tccagcaaac
2160
accaatcgtg agaggcggcc tcgctaccaa catccgaagg gagcacctaa tgcagatcta
2220
atctttaaga ctgggtgggag gagacgttga tccagcagca cgtgtcattt cattaggtcc
2280
tgtatctgat gttgtggtta gtggagtctt ccagcaattg aatgagagca gtggacacat
2340
ctcagcaggt cggtctagag agttgcgaat ctaaacctgg gacaggctgg ggccaggagg
2400
cagaaacacc agcctctgcc aacaccggaa caagccgacg cttccagaca aggcggaaaa
2460
ggccttttgt aatggaaatc tcgcgagggt taatcttctc ttgagaatgg cagtcaagaa
2520

atgagatggt tcacttgact actgagcagt tacaccaagg agagcgtgaa ggggatgatt
 2580
 gagccagaga agaaacgggt tgtgatggta atgggtgtggg ggaaatgaac ttgagcttta
 2640
 aacttgattt gagtttcatt gtctctgaat tgaacatccc acgttggaag aagatacatt
 2700
 tgggggctcc aggactacag tagaaaagta tagagcaagc aggaaaatct tctagtaaaa
 2760
 cttacatgca ggacaacaaa atgatgaaag atatccaaat accagataat ccaccaggaa
 2820
 ggcttttgtt taggaatttg tttcaagagg aacaagggat gaggggagaaa aatccgtttt
 2880
 atccatcaga gtcagtgcta taaaattgcc tattaaggta aaagaaaaat gtggagacta
 2940
 ttttactata cagagagcat taattcagat ggcttagaaa agtgatacca gccaagaac
 3000
 agggatctag gtgagcccat tgtaagtatc attgaaaaca aaacatgccc gtcaacatgt
 3060
 cacagaaaac gaacgaagga caacaagaag tggatgagaa tattttgttg accttcattg
 3120
 gtttacagcc tctgtctcta aacaaagtat ggaaacaagt agagctttta ttttgctttt
 3180
 gtttttgttt tgtttttttt tgttttcccc cactaaatag aaatgagggt ccttagtctg
 3240
 tttctgacaa tctgttaatt tcttaggaca gctgtctttg gtttgctttc cagcaggcgt
 3300
 agtatattta gtcggagagc acatctgtat gcgacaactt gattacatct ttttttctag
 3360
 ctattttgca ttttttcttt taccatgttt cagtttctgc atgtagattt aaataaaaaa
 3420
 caaaacttgt aaagtgtgaa catttcacat ggaaatgctg cccaatcttc accagcttca
 3480
 gaaatctgac ctttgccgat gctgcaataa agtgttgtaa tttaaaaaaa aaaaaaaa
 3538

<210> 3038

<211> 697

<212> PRT

<213> Homo sapiens

<400> 3038

Pro	Asn	Cys	Val	Asn	Arg	Asp	Leu	Ile	Asp	Lys	Ala	Ala	Met	Asp	Phe
1				5					10					15	
Cys	Met	Asn	Met	Asn	Thr	Lys	Ala	Asn	Arg	Lys	Lys	Leu	Val	Arg	Ala
			20					25					30		
Leu	Phe	Ile	Val	Pro	Arg	Gln	Arg	Leu	Asp	Leu	Leu	Pro	Phe	Tyr	Ala
		35				40					45				
Arg	Leu	Val	Ala	Thr	Leu	His	Pro	Cys	Met	Ser	Asp	Val	Ala	Glu	Asp
	50				55					60					
Leu	Cys	Ser	Met	Leu	Arg	Gly	Asp	Phe	Arg	Phe	His	Val	Arg	Lys	Lys
65				70				75					80		
Asp	Gln	Ile	Asn	Ile	Glu	Thr	Lys	Asn	Lys	Thr	Val	Arg	Phe	Ile	Gly
			85					90					95		
Glu	Leu	Thr	Lys	Phe	Lys	Met	Phe	Thr	Lys	Asn	Asp	Thr	Leu	His	Cys

			100					105					110				
Leu	Lys	Met	Leu	Leu	Ser	Asp	Phe	Ser	His	His	His	Ile	Glu	Met	Ala		
		115					120						125				
Cys	Thr	Leu	Leu	Glu	Thr	Cys	Gly	Arg	Phe	Leu	Phe	Arg	Ser	Pro	Glu		
		130					135					140					
Ser	His	Leu	Arg	Thr	Ser	Val	Leu	Leu	Glu	Gln	Met	Met	Arg	Lys	Lys		
145					150					155					160		
Gln	Ala	Met	His	Leu	Asp	Ala	Arg	Tyr	Val	Thr	Met	Val	Glu	Asn	Ala		
				165					170					175			
Tyr	Tyr	Tyr	Cys	Asn	Pro	Pro	Pro	Ala	Glu	Lys	Thr	Val	Lys	Lys	Lys		
			180					185					190				
Arg	Pro	Pro	Leu	Gln	Glu	Tyr	Val	Arg	Lys	Leu	Leu	Tyr	Lys	Asp	Leu		
		195					200					205					
Ser	Lys	Val	Thr	Thr	Glu	Lys	Val	Leu	Arg	Gln	Met	Arg	Lys	Leu	Pro		
		210				215					220						
Trp	Gln	Asp	Gln	Glu	Val	Lys	Asp	Tyr	Val	Ile	Cys	Cys	Met	Ile	Asn		
225					230					235					240		
Ile	Trp	Asn	Val	Lys	Tyr	Asn	Ser	Ile	His	Cys	Val	Ala	Asn	Leu	Leu		
				245				250						255			
Ala	Gly	Leu	Val	Leu	Tyr	Gln	Glu	Asp	Val	Gly	Ile	His	Val	Val	Asp		
			260					265					270				
Gly	Val	Leu	Glu	Asp	Ile	Arg	Leu	Gly	Met	Glu	Val	Asn	Gln	Pro	Lys		
		275					280					285					
Phe	Asn	Gln	Arg	Arg	Ile	Ser	Ser	Ala	Lys	Phe	Leu	Gly	Glu	Leu	Tyr		
		290				295					300						
Asn	Tyr	Arg	Met	Val	Glu	Ser	Ala	Val	Ile	Phe	Arg	Thr	Leu	Tyr	Ser		
305					310					315					320		
Phe	Thr	Ser	Phe	Gly	Val	Asn	Pro	Asp	Gly	Ser	Pro	Ser	Ser	Leu	Asp		
				325					330					335			
Pro	Pro	Glu	His	Leu	Phe	Arg	Ile	Arg	Leu	Val	Cys	Thr	Ile	Leu	Asp		
			340					345					350				
Thr	Cys	Gly	Gln	Tyr	Phe	Asp	Arg	Gly	Ser	Ser	Lys	Arg	Lys	Leu	Asp		
		355					360						365				
Cys	Phe	Leu	Val	Tyr	Phe	Gln	Arg	Tyr	Val	Trp	Trp	Lys	Lys	Ser	Leu		
		370				375					380						
Glu	Val	Trp	Thr	Lys	Asp	His	Pro	Phe	Pro	Ile	Asp	Ile	Asp	Tyr	Met		
385					390					395					400		
Ile	Ser	Asp	Thr	Leu	Glu	Leu	Leu	Arg	Pro	Lys	Ile	Lys	Leu	Cys	Asn		
				405				410						415			
Ser	Leu	Glu	Glu	Ser	Ile	Arg	Gln	Val	Gln	Asp	Leu	Glu	Arg	Glu	Phe		
			420					425					430				
Leu	Ile	Lys	Leu	Gly	Leu	Val	Asn	Asp	Lys	Asp	Ser	Lys	Asp	Phe	Met		
		435					440					445					
Thr	Glu	Gly	Glu	Asn	Leu	Glu	Asp	Glu	Glu	Glu	Glu	Glu	Gly	Gly			
		450				455					460						
Ala	Glu	Thr	Glu	Glu	Gln	Ser	Gly	Asn	Glu	Ser	Glu	Val	Asn	Glu	Pro		
465					470					475					480		
Glu	Glu	Glu	Glu	Gly	Ser	Asp	Asn	Asp	Asp	Asp	Glu	Gly	Glu	Glu	Glu		
				485				490						495			
Glu	Glu	Glu	Asn	Thr	Asp	Tyr	Leu	Thr	Asp	Ser	Asn	Lys	Glu	Asn	Glu		
			500					505					510				
Thr	Asp	Glu	Glu	Asn	Thr	Glu	Val	Met	Ile	Lys	Gly	Gly	Gly	Leu	Lys		
		515					520					525					
His	Val	Pro	Cys	Val	Glu	Asp	Glu	Asp	Phe	Ile	Gln	Ala	Leu	Asp	Lys		

```

      530              535              540
Met Met Leu Glu Asn Leu Gln Gln Arg Ser Gly Glu Ser Val Lys Val
545              550              555              560
His Gln Leu Asp Val Ala Ile Pro Leu His Leu Lys Ser Gln Leu Arg
      565              570              575
Lys Gly Pro Pro Leu Gly Gly Gly Glu Gly Glu Ala Glu Ser Ala Asp
      580              585              590
Thr Met Pro Phe Val Met Leu Thr Arg Lys Gly Asn Lys Gln Gln Phe
      595              600              605
Lys Ile Leu Asn Val Pro Met Ser Ser Gln Leu Ala Ala Asn His Trp
      610              615              620
Asn Gln Gln Gln Ala Glu Gln Glu Glu Arg Met Arg Met Lys Lys Leu
625              630              635              640
Thr Leu Asp Ile Asn Glu Arg Gln Glu Gln Glu Asp Tyr Gln Glu Met
      645              650              655
Leu Gln Ser Leu Ala Gln Arg Pro Ala Pro Ala Asn Thr Asn Arg Glu
      660              665              670
Arg Arg Pro Arg Tyr Gln His Pro Lys Gly Ala Pro Asn Ala Asp Leu
      675              680              685
Ile Phe Lys Thr Gly Gly Arg Arg Arg
      690              695

```

<210> 3039

<211> 1836

<212> DNA

<213> Homo sapiens

<400> 3039

```

nnttttttat gtggacttct tttaaacatt tattaaaaaa gcaaaatgta tgttcatctc
60
aaatctaaca gttaaaaaat ggtaaagcaa tacaacaat gtgttactag cagcatccag
120
tcgttagaat ctctcaccct gcttctcggt ctgatctgtg caagctcagt ctcttctgag
180
cctgcagcta cctccatccc tcatcgtagt gcaggccaaa ccaaatttta taaaattaac
240
aatttaaggt taaataagct taaataaggg tgtaaatac aagacacttc atcaaagctt
300
ctgtacaaag ataaacaaat ctggcattgt acaagtgggt ccgctggctc acagcacaca
360
gggaagttct agtgagtaag cagattcact ctcatctctt tccagcagag caactatata
420
aaagtgaact aagagttgaa gtgactactg accactcggg gagccattta caaggcatat
480
gtatcttttt tttgttttta atcagaacac tgtaaatatt caggcaccat ttgttctctg
540
aaataaataa gtctctaagg taactgcata tgaactagtg ttaaacacaa cagtgtcttt
600
tttttttttt aatcccccca caaagctttt ccaactatgt actatgcctc ctttcttatt
660
gctatggtaa tgtggctgtg gaaataaaac tactgtacat ccaaaaaaat agagcacctt
720
taacattaaa gtatatgtct gattatttgt tctcatgttt attttacaat actaaagccc
780

```

aaactatggt aaattgcttt acatctctac caggtcacct gatatacagg aaataaaact
 840
 caactatctt ccctcttgag gtaagcccaa gccagagcac tgtttttagca gagtctaaaa
 900
 gaaaaagggtc tcaactgtcg ccagggttta cattcatctt cacaccagga gttacattca
 960
 ttcattcttca catcggcgct gctctctgcc gtggttaccg agaaagagtc gaggtccct
 1020
 atcctgctgt ggtgaatggt gctacacaga atggaacagc aaaaacatct acgattgggt
 1080
 gaaagcacac agaaaaacca catgtttgtg acttcaaagg gacaaggggc atttcccagt
 1140
 ggtcccttga tgaggtgcgg attggctaag attttttgtc gatggtggtg aaaaaccatt
 1200
 ctgtgaattt ccgcagctga gctgtcgcgg tctgggactc ctctgcagc ctcatgttgt
 1260
 cctgtctcag gtgctgcact tctgcttgga gaacggcctt gtcttgtttt tcttccgaa
 1320
 ggtcggctctg gagggtgcga agaattaatt ccagctgatt gactttcccg gtcagtggtg
 1380
 atggagaacg ctccccagtt gtgtccatga actctttgcc actgcctgga tctacacata
 1440
 agggcagctc tgatgcccct cccggacaca gccacagggt tagattggac ccacctcggtg
 1500
 gatgctgcac gggcatttga agaccagagg gtggcatcct tctgcaccct gacagatatg
 1560
 cagcatgggc aggacctgga aggggcccga gagctgccct tatgtgtaga tccaggcagt
 1620
 ggcaaagagt tcatggacac aactggggag cgttctccat caccactgac cgggaaagtc
 1680
 aatcagctgg aattaattct tcgacaactc cagaccgacc ttcggaagga aaaacaagac
 1740
 aaggccggtc tccaagcaga agtgcagcac ctgagacagg acaacatgag gctgcaggaa
 1800
 gagtcccaga ccgcgacagc tcagctgcgg aaattg
 1836

<210> 3040

<211> 142

<212> PRT

<213> Homo sapiens

<400> 3040

Thr Leu Cys His Cys Leu Asp Leu His Ile Arg Ala Ala Leu Met Pro
 1 5 10 15
 Leu Pro Asp Thr Ala Thr Gly Leu Asp Trp Thr His Leu Val Asp Ala
 20 25 30
 Ala Arg Ala Phe Glu Asp Gln Arg Val Ala Ser Phe Cys Thr Leu Thr
 35 40 45
 Asp Met Gln His Gly Gln Asp Leu Glu Gly Ala Gln Glu Leu Pro Leu
 50 55 60
 Cys Val Asp Pro Gly Ser Gly Lys Glu Phe Met Asp Thr Thr Gly Glu
 65 70 75 80
 Arg Ser Pro Ser Pro Leu Thr Gly Lys Val Asn Gln Leu Glu Leu Ile

				85					90					95				
Leu	Arg	Gln	Leu	Gln	Thr	Asp	Leu	Arg	Lys	Glu	Lys	Gln	Asp	Lys	Ala			
			100					105					110					
Gly	Leu	Gln	Ala	Glu	Val	Gln	His	Leu	Arg	Gln	Asp	Asn	Met	Arg	Leu			
		115					120					125						
Gln	Glu	Glu	Ser	Gln	Thr	Ala	Thr	Ala	Gln	Leu	Arg	Lys	Leu					
	130						135					140						

<210> 3041

<211> 1512

<212> DNA

<213> Homo sapiens

<400> 3041

```

ncacgaggag ccagagtctg tcaggcgggt tggatgaagg cgcggggccg ggcacggcgt
60
tgaggagtgc cggcagggac cggccaggcg ggctgcaggc acctcagagc cggggacacc
120
ccctcaacgt ccgcaggcgc gatgaaggca ctgatcttag tggggggcta tgggacgcgg
180
ctacggccgc tgacgctgag caccocgaag ccactggtgg acttctgcaa taagcccatc
240
ttgctgcacc aagtggaggc gctagccgcg gcaggcgtgg accacgtgat cctggccgtg
300
agctacatgt cgcaggtgct ggagaaggaa atgaaggcac aggagcagag gctgggaatc
360
cgaatctcca tgtcccatga agaggagcct ttggggacag ctggggccct ggcgctggcc
420
cgtgacctac tctctgagac tgcagacctt ttcttcgtcc tcaacagtga cgtgatctgc
480
gatttccctt tccaagccat ggtgcagttc caccggcacc atggccagga gggctccatc
540
ctggtgacca aggtggagga accctccaag tacgggtgtg tgggtgtgtga ggctgacaca
600
ggccgcattc accggttcgt ggagaagcca cagggtgttg tgtccaataa gatcaacgca
660
ggcatgtaca tcctgagccc tgcagtgtct cggcgcatcc agctgcagcc tacgtccatt
720
gagaaggagg tcttcccat tatggccaag gaggggcagc tatatgcat ggagttacag
780
ggcttctgga tggacattgg gcagcccaag gacttcctca ctggcatgtg cctcttctg
840
cagtcactga ggcagaagca gcctgagcgg ctgtgctcag gccctggcat tgtgggcaac
900
gtgctgggtg acccaagtgc ccgcatcggc cagaactgca gcattggccc caatgtgagc
960
ctgggacctg gcgtgggtgg cgaagatggg gtgtgtatcc ggcggtgcac ggtgctgcgg
1020
gatgcccgga tccgttccca ttctgggctt gagtcctgca ttgtgggctg gcgctgccgc
1080
gtgggtcagt gggtagcat ggagaacgtg acagtgtgtg gtgaggacgt catagttaat
1140
gatgagctct acctcaacgg agccagcgtg ctgcccaca agtctattgg cgagtcagtg
1200

```


ccagagcctc gstatcatcat gtgaggggat gcagtggggc tggccgagcc ccggttttcc
 1260
 catcagcaag gggagtgtctg gcctgacaca tcagaagacc ctggacttgt cattatttgt
 1320
 ctgggggggca ctgggtgaag ctgaagctgt tggacacctg ccttctcatg tggacatcat
 1380
 ctggcaggat ccctgctggg cacacccac aaacccact ccctcaagaa gggccagggc
 1440
 cagggctgta tggaataata atttaatgct cactgtgaaa aaaaaaaaaa aaaaaaaaaa
 1500
 aaaaaaaaaa aa
 1512

<210> 3042

<211> 360

<212> PRT

<213> Homo sapiens

<400> 3042

Met	Lys	Ala	Leu	Ile	Leu	Val	Gly	Gly	Tyr	Gly	Thr	Arg	Leu	Arg	Pro
1				5					10					15	
Leu	Thr	Leu	Ser	Thr	Pro	Lys	Pro	Leu	Val	Asp	Phe	Cys	Asn	Lys	Pro
			20					25					30		
Ile	Leu	Leu	His	Gln	Val	Glu	Ala	Leu	Ala	Ala	Ala	Gly	Val	Asp	His
	35						40					45			
Val	Ile	Leu	Ala	Val	Ser	Tyr	Met	Ser	Gln	Val	Leu	Glu	Lys	Glu	Met
	50					55					60				
Lys	Ala	Gln	Glu	Gln	Arg	Leu	Gly	Ile	Arg	Ile	Ser	Met	Ser	His	Glu
65					70				75					80	
Glu	Glu	Pro	Leu	Gly	Thr	Ala	Gly	Pro	Leu	Ala	Leu	Ala	Arg	Asp	Leu
				85					90					95	
Leu	Ser	Glu	Thr	Ala	Asp	Pro	Phe	Phe	Val	Leu	Asn	Ser	Asp	Val	Ile
			100					105					110		
Cys	Asp	Phe	Pro	Phe	Gln	Ala	Met	Val	Gln	Phe	His	Arg	His	His	Gly
	115						120					125			
Gln	Glu	Gly	Ser	Ile	Leu	Val	Thr	Lys	Val	Glu	Glu	Pro	Ser	Lys	Tyr
	130					135						140			
Gly	Val	Val	Val	Cys	Glu	Ala	Asp	Thr	Gly	Arg	Ile	His	Arg	Phe	Val
145					150				155					160	
Glu	Lys	Pro	Gln	Val	Phe	Val	Ser	Asn	Lys	Ile	Asn	Ala	Gly	Met	Tyr
			165						170					175	
Ile	Leu	Ser	Pro	Ala	Val	Leu	Arg	Arg	Ile	Gln	Leu	Gln	Pro	Thr	Ser
			180					185					190		
Ile	Glu	Lys	Glu	Val	Phe	Pro	Ile	Met	Ala	Lys	Glu	Gly	Gln	Leu	Tyr
	195						200					205			
Ala	Met	Glu	Leu	Gln	Gly	Phe	Trp	Met	Asp	Ile	Gly	Gln	Pro	Lys	Asp
	210					215					220				
Phe	Leu	Thr	Gly	Met	Cys	Leu	Phe	Leu	Gln	Ser	Leu	Arg	Gln	Lys	Gln
225					230					235				240	
Pro	Glu	Arg	Leu	Cys	Ser	Gly	Pro	Gly	Ile	Val	Gly	Asn	Val	Leu	Val
			245						250					255	
Asp	Pro	Ser	Ala	Arg	Ile	Gly	Gln	Asn	Cys	Ser	Ile	Gly	Pro	Asn	Val
			260					265					270		
Ser	Leu	Gly	Pro	Gly	Val	Val	Val	Glu	Asp	Gly	Val	Cys	Ile	Arg	Arg

275 280 285
 Cys Thr Val Leu Arg Asp Ala Arg Ile Arg Ser His Ser Trp Leu Glu
 290 295 300
 Ser Cys Ile Val Gly Trp Arg Cys Arg Val Gly Gln Trp Val Arg Met
 305 310 315 320
 Glu Asn Val Thr Val Leu Gly Glu Asp Val Ile Val Asn Asp Glu Leu
 325 330 335
 Tyr Leu Asn Gly Ala Ser Val Leu Pro His Lys Ser Ile Gly Glu Ser
 340 345 350
 Val Pro Glu Pro Arg Ile Ile Met
 355 360

<210> 3043
 <211> 394
 <212> DNA
 <213> Homo sapiens

<400> 3043
 agatctcctt ggatctggag gccctggctt tcagccagag gcagggggag aaagatgatg
 60
 tctcatgatg ccagcgcttc ctcttcactg gcgtctgacc caggagcagt ccagaatcag
 120
 cttctctgac ctcaactcaa ctcacgtgtc tttgacactt taagggactt cctgttttag
 180
 ggtcttcttg ctgggtgtca ttgaatgggc agtgattctc taactttaga ctgatgttcc
 240
 ccagcctttg tttggggact cggaggcaga gtagacagtt acccttacct ctggggtggg
 300
 gagggtcata ttcttggtat ccccgaggag tcaacagggg cttcattttt ctgagggact
 360
 agagggtctt gtggagctcc tgggacagag atct
 394

<210> 3044
 <211> 115
 <212> PRT
 <213> Homo sapiens

<400> 3044
 Met Lys Pro Leu Leu Thr Ser Trp Gly Tyr Gln Glu Tyr Asp Pro Pro
 1 5 10 15
 Gln Pro Arg Gly Lys Gly Asn Cys Leu Leu Cys Leu Arg Val Pro Lys
 20 25 30
 Gln Arg Leu Gly Asn Ile Ser Leu Lys Leu Glu Asn His Cys Pro Phe
 35 40 45
 Asn Asp Thr Gln Pro Glu Asp Pro Lys Thr Gly Ser Pro Leu Lys Cys
 50 55 60
 Gln Arg His Val Ser Trp Ser Glu Val Arg Glu Ala Asp Ser Gly Leu
 65 70 75 80
 Leu Leu Gly Gln Thr Pro Val Lys Arg Lys Arg Trp His His Glu Thr
 85 90 95
 Ser Ser Phe Ser Pro Cys Leu Trp Leu Lys Ala Arg Ala Ser Arg Ser
 100 105 110
 Lys Glu Ile

115

<210> 3045
 <211> 605
 <212> DNA
 <213> Homo sapiens

<400> 3045
 nnggatcctt gtcgtagtct tgcaggagaa aattgctgcc tttgatagct gtactttcac
 60
 gaagaaattc tttgttaciaa gctgctatcc atgtccaggg ccaaacaatga atcctattgc
 120
 tcttgggagc cgctggcttg cttatgcaga aaacaagttg attcgatgtc atcagtcccc
 180
 tgggtggagcc tgtggagaca acattcagtc ttatactgcc acagtcatta gtgctgctaa
 240
 aacattgaaa agtggcctga caatggtagg gaaagtgggtg actcagctga caggcacact
 300
 gccttcaggt gtgacagaag atgatgttgc catccacagt aattcacggc ggagtccttt
 360
 ggtcccaggc atcatcacag ttattgacac cgaaaccgtg gagagggcca ggtgtttgtg
 420
 agtgaggatc ttgacagtga tggcattgtg gcccaacttc ctgcccata gaagccagtg
 480
 tgctgcatgg cttttaatac aagtggaatg cttctagtca caacagacac ccttggccat
 540
 gactttcatg tcttccaaat tctgactcat ccttggctct catctacgga gagacgacaa
 600
 cgcgt
 605

<210> 3046
 <211> 72
 <212> PRT
 <213> Homo sapiens

<400> 3046
 His Arg Asn Arg Gly Glu Gly Gln Val Phe Val Ser Glu Asp Leu Asp
 1 5 10 15
 Ser Asp Gly Ile Val Ala His Phe Pro Ala His Glu Lys Pro Val Cys
 20 25 30
 Cys Met Ala Phe Asn Thr Ser Gly Met Leu Leu Val Thr Thr Asp Thr
 35 40 45
 Leu Gly His Asp Phe His Val Phe Gln Ile Leu Thr His Pro Trp Ser
 50 55 60
 Ser Ser Thr Glu Arg Arg Gln Arg
 65 70

<210> 3047
 <211> 391
 <212> DNA
 <213> Homo sapiens

<400> 3047

attttggagg agaggaagaa tgaaatgacc caagtcatta cccgaaccca agaggagaaa
 60
 ctggaacatg tccgtgctct gatcaaaaag tattctgac atttggagaa cgtctcaaag
 120
 ttggttgagt caggaattca gtttatggat gagccagaaa tggcagtgtt tctgcagaat
 180
 gccaaaaccc tgctaaaaaa aatctcggaa gcatcaaagg catttcagat ggagaaaata
 240
 gaacatggct atgagaacat gaaccacttc acagtcaacc tcaatagaga agaaaagata
 300
 atacgtgaaa ttgactttta cagagaagat gaagatgaag aagaagaaga aggcggagaa
 360
 ggagaaaaaag aagagaagga gaagtgggag a
 391

<210> 3048

<211> 122

<212> PRT

<213> Homo sapiens

<400> 3048

Met	Thr	Gln	Val	Ile	Thr	Arg	Thr	Gln	Glu	Glu	Lys	Leu	Glu	His	Val
1				5				10						15	
Arg	Ala	Leu	Ile	Lys	Lys	Tyr	Ser	Asp	His	Leu	Glu	Asn	Val	Ser	Lys
		20						25					30		
Leu	Val	Glu	Ser	Gly	Ile	Gln	Phe	Met	Asp	Glu	Pro	Glu	Met	Ala	Val
	35						40					45			
Phe	Leu	Gln	Asn	Ala	Lys	Thr	Leu	Leu	Lys	Lys	Ile	Ser	Glu	Ala	Ser
	50					55					60				
Lys	Ala	Phe	Gln	Met	Glu	Lys	Ile	Glu	His	Gly	Tyr	Glu	Asn	Met	Asn
65					70					75				80	
His	Phe	Thr	Val	Asn	Leu	Asn	Arg	Glu	Glu	Lys	Ile	Ile	Arg	Glu	Ile
				85					90					95	
Asp	Phe	Tyr	Arg	Glu	Asp	Glu	Asp	Glu	Glu	Glu	Glu	Glu	Gly	Gly	Glu
			100					105					110		
Gly	Glu	Lys	Glu	Glu	Lys	Glu	Lys	Trp	Glu						
			115					120							

<210> 3049

<211> 599

<212> DNA

<213> Homo sapiens

<400> 3049

ngttgtcctc ctcaccttca cccaaatctt taattcacgg agctgcatcc ccttcttttg
 60
 tttcagatgt tcctggttcg ccgggacagc agctcgaagc agctggtgct ctgtgtccac
 120
 tttccttctc tgaacgaaag ctcggccgag gtgctcgaat acaccattaa ggaagaaaag
 180
 tcgatattgt acctggaagg ctcggctctt gtgtttgagg acatcttcag attgattgcg
 240
 ttctactgtg tcagtagaga cttactgccc ttcacactgc ggctacccca ggccatcctt
 300

gaggccagca gcttcacgga ccttgagacc atcgccaacc tgggtctggg tttctgggac
 360
 tcctcgctga atcctccaca agaaagaggg aagccagcag agccccaag agaccgggccc
 420
 cccggattcc ccctagtctc cagcctcagg cccacagccc atgacgcaaa ctgtgcctgt
 480
 gaaatcgagc tgtcggtagg aaatgaccgc ctgtggtttg tgaatcctat tttcatcgag
 540
 gactgcagca gcgcctgcc caccgaccag ccacctcttg gaaattgccc ttcacgcgt
 599

<210> 3050

<211> 177

<212> PRT

<213> Homo sapiens

<400> 3050

Met	Phe	Leu	Val	Arg	Arg	Asp	Ser	Ser	Ser	Lys	Gln	Leu	Val	Leu	Cys
1				5					10					15	
Val	His	Phe	Pro	Ser	Leu	Asn	Glu	Ser	Ser	Ala	Glu	Val	Leu	Glu	Tyr
			20					25					30		
Thr	Ile	Lys	Glu	Glu	Lys	Ser	Ile	Leu	Tyr	Leu	Glu	Gly	Ser	Ala	Leu
		35					40					45			
Val	Phe	Glu	Asp	Ile	Phe	Arg	Leu	Ile	Ala	Phe	Tyr	Cys	Val	Ser	Arg
	50					55					60				
Asp	Leu	Leu	Pro	Phe	Thr	Leu	Arg	Leu	Pro	Gln	Ala	Ile	Leu	Glu	Ala
65					70					75					80
Ser	Ser	Phe	Thr	Asp	Leu	Glu	Thr	Ile	Ala	Asn	Leu	Gly	Leu	Gly	Phe
				85					90					95	
Trp	Asp	Ser	Ser	Leu	Asn	Pro	Pro	Gln	Glu	Arg	Gly	Lys	Pro	Ala	Glu
			100					105					110		
Pro	Pro	Arg	Asp	Arg	Ala	Pro	Gly	Phe	Pro	Leu	Val	Ser	Ser	Leu	Arg
		115					120					125			
Pro	Thr	Ala	His	Asp	Ala	Asn	Cys	Ala	Cys	Glu	Ile	Glu	Leu	Ser	Val
		130				135					140				
Gly	Asn	Asp	Arg	Leu	Trp	Phe	Val	Asn	Pro	Ile	Phe	Ile	Glu	Asp	Cys
145					150				155					160	
Ser	Ser	Ala	Leu	Pro	Thr	Asp	Gln	Pro	Pro	Leu	Gly	Asn	Cys	Pro	Ser
				165					170					175	

Arg

<210> 3051

<211> 820

<212> DNA

<213> Homo sapiens

<400> 3051

nattcggcac gacggcatca agtctgggaa gaaacccacc cagagggctt cgctgatcat
 60
 agacgatgga aacattgccca gtgaagacag ctccctctca gatgcccttg ttcttgagga
 120
 tgaagactct caggttacca gcacaatatc cccctacat tctcctcaca agggactccc
 180

tcctcggcca ccgtcgcaaca acaggcctcc tcctccccag tccctggagg gactccgaca
 240
 gatgcactat caccgncaac gactatgaca agtcacccat caagcccaaa atgtggagtg
 300
 agtcctcttt agatgaaccc tatgagaagg tcaagaagcg ctctcttcac agccattcca
 360
 gcagccacaa gcgcttcccc agcacaggaa gctgtgcgga agccggcgga ggaagcaact
 420
 ccttgcagaa cagccccatc cgcggcctcc cgactggaa ctcccagtcc agcatgccgt
 480
 ccacgccaga cctgcgggtc cggagtcctcc actacgtcca ttccacgagg tcggtggaca
 540
 tcagccccac ccgactgcac agcctcgcac tgcactttag gcaccggagc tccagcctgg
 600
 agtcccaggg caagctcctg ggctcggaaa acgacaccgg gagccccgac ttctacaccc
 660
 cgcggaactc tagcagcaac ggctcagacc ccatggacga ctgctcgtcg tgcaccagcc
 720
 actcgagctc ggagcactac taccggcgcg agatgaacgc caactactcc acgctggccg
 780
 aggactcgcc gtccaaggcg cggctgcatg gatattcgac
 820

<210> 3052

<211> 62

<212> PRT

<213> Homo sapiens

<400> 3052

Arg	Leu	Ser	Gly	Tyr	Gln	His	Asn	Ile	Pro	Pro	Thr	Phe	Ser	Ser	Gln
1				5				10						15	
Gly	Thr	Pro	Ser	Ser	Ala	Thr	Val	Ala	Gln	Gln	Ala	Ser	Ser	Ser	Pro
			20					25					30		
Val	Pro	Gly	Gly	Thr	Pro	Thr	Asp	Ala	Leu	Ser	Pro	Xaa	Thr	Thr	Met
		35					40					45			
Thr	Ser	His	Pro	Ser	Ser	Pro	Lys	Cys	Gly	Val	Ser	Pro	Leu		
	50					55						60			

<210> 3053

<211> 2625

<212> DNA

<213> Homo sapiens

<400> 3053

agtggctgnt cagaacatac atctntcatg ctttcattgt ctcaccaaga gaagccagaa
 60
 gagcctccga catctaataga atgcttagaa gatataaccg taaaagatgg actttctctc
 120
 cagtttaaaa gatttagaga aactgtacca acttgggata caataagaga tgaagaagat
 180
 gttcttgatg agctcttgca gtatttgggt gttactagtc ctgaatgctt acagagaact
 240
 ggaatctcac ttaatatcc tgctccacaa cctgtgtgca tttctgaaaa acaagaaaat
 300

gatgttatta atgctatcct taagcaacat acagaagaaa aagaatttgt tgagaagcac
360
tttaatgact taaacatgaa agctgtggaa caagatgaac caatacctca aaaacctcag
420
tcagcatttt attattgcag attgcttctt agtatattgg gaatgaattc ctgggacaaa
480
cggaggagct ttcctctcct gaagaaaaat gaaaagctac ttagagaact taggaacttg
540
gattcaaggc agtgccgaga gacacacaag attgcagtat tttatgttgc tgaaggacaa
600
gaagacaaac actccattct caccaatata ggaggaagtc aagcatatga agattttgta
660
gctgggtcttg gttggggaggt aaatcttaca aaccattgtg gttttatggg aggactacaa
720
aaaaacaaaa gcaactggatt gaccactcca tattttgcta cctctacagt agaggtaata
780
tttcacgtgt caacaagaat gccttctgat tctgatgatt ctttgaccaa aaaattgaga
840
catttgggaa atgatgaagt gcacattgtt tggtcagagc atactagaga ctacaggaga
900
ggaattatc ccacagaatt tgggtgatgtc cttattgtaa tatatccaat gaaaaatcac
960
atgttcagta ttcagataat gaaaaaacca gaggttccct tctttggtcc cctttttgat
1020
ggtgctattg tgaatggaaa ggttctaccc attatgggta gagcaacagc tataaatgca
1080
agccgtgctc tgaaatctct gattccattg tatcaaaact tctatgagga gagagcacga
1140
tacctgcaaa caattgtcca gcaccactta gaaccaacaa catttgaaga ttttgagca
1200
caggtttttt ctccagctcc ctaccacat ttaccatctg atgccgatca ttaaatatca
1260
gttctgttta tctgaaggct cctaccaga gattctaccc agtgaaactc ccacagcaac
1320
gcaggtagat ggggctgacc tggcctctcc aatgtctcct cgaactagca aaagccgcat
1380
gtccatgaag ctgcgtcgtt cctctggctc agccaataaa tcctaaggag acaagcagcc
1440
cagcagtgat cagcagtagc caccttagca cgaacatagg gttaaccctt tcaggccttc
1500
atgtctgcca taacatgcat gtttcttctt gtacatttat ttgagaaaac actggattta
1560
aataatttta aataatttgt agcttaatat taaagattta agttatttat tgtttcattt
1620
ttttcccac aatccaagct gccatatttt gagggcaggg ggagttttat tctacaccct
1680
ttaccttctt agataattat gtctaagtag ttttatcttt aatttcattg ttaactgtga
1740
gccaaaatac aattggacaa ttagtctcat tatttattgt gcccattgc aactttatgg
1800
ttcaataaat atataatttt ttacaaatgt aaaattttac atttaagcat ttgtaaagtt
1860
acagcaaaaag atgtacctgt taatacacag aatgtgtaca gattatttgt tatgacaata
1920

aaacactcaa aataaatggt ctttagcatc tcaaattcca actgaaatca ttttagtatt
 1980
 aactcttctt cccaaagcaa tgtctcattt cttggctgtg caggtgatgc catgttatat
 2040
 ccaataacta gaaaaatcac tgtgctgaac ttttatgttt agcttccaag tatttttcta
 2100
 atgttttgca tttcaagtgg tatcactggt aaatgccatt tgttttcaga ttgtggcctt
 2160
 ttattattgg ctgctagatc ctgggtgttc tatgttcttt ttttaagcacc aaaaagaaga
 2220
 tggggaagaa aagaaggaaa attttctgat ataaatatgt tgttcaaatt atgagtatta
 2280
 tttaaaaaag aaaaaggaac ataaccaggt agtctaagtt aaatctaata ttgttaatac
 2340
 tgaacttgca ggtccagggt ggtatacatt ccaccctcta gaagtatttt cttacagtag
 2400
 ataagctgct cacattttgt tttgaatggg catctcctga ggaaatgtag catgacattg
 2460
 gtactaactg catgtgtaaa tacatcatatc tggcaaaccg taaaatataa attatgtatc
 2520
 atcattcatg tagtatctat aatttgtaac agtggggggg aaagatgaca tgggtatttaa
 2580
 taatacaata aaaatattct tatcacttcc taaaaaaaaa aaaaa
 2625

<210> 3054

<211> 417

<212> PRT

<213> Homo sapiens

<400> 3054

Ser	Gly	Xaa	Ser	Glu	His	Thr	Ser	Xaa	Met	Leu	Ser	Leu	Ser	His	Gln
1				5					10					15	
Glu	Lys	Pro	Glu	Glu	Pro	Pro	Thr	Ser	Asn	Glu	Cys	Leu	Glu	Asp	Ile
			20						25					30	
Thr	Val	Lys	Asp	Gly	Leu	Ser	Leu	Gln	Phe	Lys	Arg	Phe	Arg	Glu	Thr
		35					40						45		
Val	Pro	Thr	Trp	Asp	Thr	Ile	Arg	Asp	Glu	Glu	Asp	Val	Leu	Asp	Glu
	50					55					60				
Leu	Leu	Gln	Tyr	Leu	Gly	Val	Thr	Ser	Pro	Glu	Cys	Leu	Gln	Arg	Thr
65					70					75				80	
Gly	Ile	Ser	Leu	Asn	Ile	Pro	Ala	Pro	Gln	Pro	Val	Cys	Ile	Ser	Glu
			85						90					95	
Lys	Gln	Glu	Asn	Asp	Val	Ile	Asn	Ala	Ile	Leu	Lys	Gln	His	Thr	Glu
			100					105					110		
Glu	Lys	Glu	Phe	Val	Glu	Lys	His	Phe	Asn	Asp	Leu	Asn	Met	Lys	Ala
	115						120					125			
Val	Glu	Gln	Asp	Glu	Pro	Ile	Pro	Gln	Lys	Pro	Gln	Ser	Ala	Phe	Tyr
	130					135					140				
Tyr	Cys	Arg	Leu	Leu	Leu	Ser	Ile	Leu	Gly	Met	Asn	Ser	Trp	Asp	Lys
145					150					155				160	
Arg	Arg	Ser	Phe	His	Leu	Leu	Lys	Lys	Asn	Glu	Lys	Leu	Leu	Arg	Glu
			165						170					175	
Leu	Arg	Asn	Leu	Asp	Ser	Arg	Gln	Cys	Arg	Glu	Thr	His	Lys	Ile	Ala


```

<210> 3055
<211> 905
<212> DNA
<213> Homo sapiens

<400> 3055
tgtacaggcc cgagctgtgt tctacccccct cttaggggttg ggaggagctg tgaacatgtc
60
ctatcgaacc ctctacatcg ggacaggagc tgacatggat gtgtgcctta caaactatgg
120
tcactgtaac tacgtgtccg ggaaacatgc ctgcatattc tacgatgaga ataccaaaca
180
ttatgagctg ttaaactaca gtgagcatgg gacaacggtg gacaatgtgc tgtattcatg
240
tgacttctcg gagaagaccc cgccaacccc cccaagcagt attgttgcca aagtgcagag
300
tgtcatcagg cgccgccggc accagaaaca ggacgaagag ccaagtgagg aggcagccat
360
gatgagttcc caggcccagg ggccgcagcg gagaccctgc aattgcaaag ccagcagctc
420
gagcttgatt ggggggcagtg gggccggctg ggagggcaca gccttactgc accatggcag
480

```

ctacatcaag ctgggctgcc tgcagtttgt cttcagcatc actgagtttg cgaccaaaca
 540
 gcccaaaggc gatgccagcc tgctgcagga tggggtcttg gccgagaagc tctctctcaa
 600
 gccccaccag ggccctgtgc tgcgctccaa ctctgttctt taggactggc ggctacccccg
 660
 ccactggcct gtacaccac ccaagactcc tgcaatgcaa aaatgtacac aaaccaagcc
 720
 cgggtgtttt ctatactcta ccagaaaccc ttcaactaca atctttgcat gaaatgaaga
 780
 aaaccttttg actgtttttt aaaaatcctt tttcttttct caagttctag ggggcatttg
 840
 cacatatatt tgtactcaac atttcatggg aaagcggcag acctgagctg aggaacagcg
 900
 tgggc
 905

<210> 3056

<211> 195

<212> PRT

<213> Homo sapiens

<400> 3056

Met	Ser	Tyr	Arg	Thr	Leu	Tyr	Ile	Gly	Thr	Gly	Ala	Asp	Met	Asp	Val
1				5					10					15	
Cys	Leu	Thr	Asn	Tyr	Gly	His	Cys	Asn	Tyr	Val	Ser	Gly	Lys	His	Ala
			20					25					30		
Cys	Ile	Phe	Tyr	Asp	Glu	Asn	Thr	Lys	His	Tyr	Glu	Leu	Leu	Asn	Tyr
	35						40				45				
Ser	Glu	His	Gly	Thr	Thr	Val	Asp	Asn	Val	Leu	Tyr	Ser	Cys	Asp	Phe
	50					55				60					
Ser	Glu	Lys	Thr	Pro	Pro	Thr	Pro	Pro	Ser	Ser	Ile	Val	Ala	Lys	Val
65					70				75					80	
Gln	Ser	Val	Ile	Arg	Arg	Arg	Arg	His	Gln	Lys	Gln	Asp	Glu	Glu	Pro
			85					90					95		
Ser	Glu	Glu	Ala	Ala	Met	Met	Ser	Ser	Gln	Ala	Gln	Gly	Pro	Gln	Arg
			100				105					110			
Arg	Pro	Cys	Asn	Cys	Lys	Ala	Ser	Ser	Ser	Ser	Leu	Ile	Gly	Gly	Ser
	115						120					125			
Gly	Ala	Gly	Trp	Glu	Gly	Thr	Ala	Leu	Leu	His	His	Gly	Ser	Tyr	Ile
	130					135				140					
Lys	Leu	Gly	Cys	Leu	Gln	Phe	Val	Phe	Ser	Ile	Thr	Glu	Phe	Ala	Thr
145					150				155					160	
Lys	Gln	Pro	Lys	Gly	Asp	Ala	Ser	Leu	Leu	Gln	Asp	Gly	Val	Leu	Ala
			165				170					175			
Glu	Lys	Leu	Ser	Leu	Lys	Pro	His	Gln	Gly	Pro	Val	Leu	Arg	Ser	Asn
			180				185					190			
Ser	Val	Pro													
			195												

<210> 3057

<211> 2169

<212> DNA

<213> Homo sapiens

<400> 3057
nnacgcgtgg aggtcgtgag ccaccgcgcc acgctcctgg cgccagatac cggggagacc
60
acgacgctgc ctctggggcg ccatgagttc ctgttcagct tccagctgcc cccgaccctg
120
gtgacatcct tcgagggcaa acacggtagt gtccgctact gtatcaagga caccctgcac
180
cggccctggg tcccagcacg ccgggcaagg aagggtgttca ctgtcatcga gcctgtggac
240
atcaacacgc cagccctgct ggcacctcaa gcgggggctc gggaaaagggt tgcccgatcc
300
tggtactgta accgtggcct agtctccctt tcggccaaga tcgaccgcaa gggctacacc
360
ccaggagagg tcatccctgt ctttgccgag atcgacaacg gctccacacg tcctgtgctg
420
cctcgggcag ccgtgggtgca gacacagacg ttcatggccc gaggcgcccg aaagcagaaa
480
cgggcagtgg tggccagcct cgcgggagcag ccggtgggccc ccgggcagcg ggcgctgtgg
540
cagggccggg cactgcggat cccccagtg ggtccttcca tcctgcaactg ccgcgttcta
600
cacgtggact acgcactcaa ggtctgtgtg gatatcccag gaacgtccaa gctgctgctg
660
gagctgccac tggatgatcg caccattccc ttgcaccctt ttggcagccg ttctccagc
720
gtgggcagcc acgccagctt cctgctggac tggaggctgg gggccttgcc ggagcggcct
780
gaggctctc ctgagtactc ggagggtgta gccgacactg aggaggcagc cttggggcag
840
agccccctcc cgcttcgcga ggaccccgac atgagccttg aaggcccgtt cttgcctac
900
atccaagagt tccgctaccg ccgcgccccc ctgtactctg aggaggatcc aaacccactc
960
ttgggggaca tgaggccgcg ctgcatgact tgctgaacgg cacagggacc cctcgaggaa
1020
caagggtgca caccagcttt cagccaccat gactgtgggg agtggctgga ccaagggtg
1080
acctccccga ctgcatcaaa gttggggaac caagtctcag agtgaggcgg gggcctttcg
1140
gatatcacat gggacagagg aagagcccgg ctggaatctg acttacctgg accgctgtcc
1200
ttgtgaggca ttgaatgccc agtgcagtat ccgagagact gtttaataac ctgtcttccc
1260
agccaattgg tgggtgctgga atccccctagg agccttcagt ctgggagaaa cagagccaga
1320
catagacagt tccagcatca cagaaccaga agaagagacc tgcaactgtg agagtccaga
1380
caggaagcag agaaggcgtc cttgcggaaa gggcatttta gctgaggctt tggagtacga
1440
ataggagctc agcaggcaga cgaatgagga ataaaggctc gagaaggctc gagctgagtg
1500
acgttttgaa tccaccccggt ttattgtaga actggggggt cagagggcag gtgcctcaga
1560

gttgaggcca cacagtgagg tctggtgggt gaaaggaccc aggaacgagg cgttcaggaa
 1620
 agcaggttgt cagagctatg tggagtctgt ggggtggcagg ggcagccgct ccagcctttg
 1680
 aagactttga aagccagaga ttcttgggcg aggcttggac ttcttgggag ctctctcaag
 1740
 taccagggg catcagagct gcctgggtgt tacatggccc agggaacca ggttcagggt
 1800
 aggacaggca agaccagata cccaatgtgc aaagtgaaaa cactgggctc cctgttaaac
 1860
 gatgaagaat tcaagacagt gacagcatta cgtcaccctt ggggacagag gtcagcctaa
 1920
 ggtgacacac ggggactact gtgcttcggg aggctccctg tgtcctggag gagaaaagca
 1980
 ttagaggggg cagctggaca agctcccaac tgcagagtcc cagccctggc tggggcaggg
 2040
 ccccgccctg ggactcagca tttctgatat gccttaagaa ttcattctgt tttgtacaat
 2100
 tattttttta aagtaaactg gtggagaaag aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 2160
 aaaaaaaaaa
 2169

<210> 3058

<211> 298

<212> PRT

<213> Homo sapiens

<400> 3058

Phe	Gln	Leu	Pro	Pro	Thr	Leu	Val	Thr	Ser	Phe	Glu	Gly	Lys	His	Gly
1				5					10					15	
Ser	Val	Arg	Tyr	Cys	Ile	Lys	Ala	Thr	Leu	His	Arg	Pro	Trp	Val	Pro
			20					25					30		
Ala	Arg	Arg	Ala	Arg	Lys	Val	Phe	Thr	Val	Ile	Glu	Pro	Val	Asp	Ile
			35				40					45			
Asn	Thr	Pro	Ala	Leu	Leu	Ala	Pro	Gln	Ala	Gly	Ala	Arg	Glu	Lys	Val
	50				55					60					
Ala	Arg	Ser	Trp	Tyr	Cys	Asn	Arg	Gly	Leu	Val	Ser	Leu	Ser	Ala	Lys
65					70				75					80	
Ile	Asp	Arg	Lys	Gly	Tyr	Thr	Pro	Gly	Glu	Val	Ile	Pro	Val	Phe	Ala
			85					90						95	
Glu	Ile	Asp	Asn	Gly	Ser	Thr	Arg	Pro	Val	Leu	Pro	Arg	Ala	Ala	Val
			100					105					110		
Val	Gln	Thr	Gln	Thr	Phe	Met	Ala	Arg	Gly	Ala	Arg	Lys	Gln	Lys	Arg
	115						120					125			
Ala	Val	Val	Ala	Ser	Leu	Ala	Gly	Glu	Pro	Val	Gly	Pro	Gly	Gln	Arg
	130					135					140				
Ala	Leu	Trp	Gln	Gly	Arg	Ala	Leu	Arg	Ile	Pro	Pro	Val	Gly	Pro	Ser
145					150				155					160	
Ile	Leu	His	Cys	Arg	Val	Leu	His	Val	Asp	Tyr	Ala	Leu	Lys	Val	Cys
			165					170						175	
Val	Asp	Ile	Pro	Gly	Thr	Ser	Lys	Leu	Leu	Glu	Leu	Pro	Leu	Val	
			180					185					190		
Ile	Gly	Thr	Ile	Pro	Leu	His	Pro	Phe	Gly	Ser	Arg	Ser	Ser	Ser	Val

	195		200		205										
Gly	Ser	His	Ala	Ser	Phe	Leu	Leu	Asp	Trp	Arg	Leu	Gly	Ala	Leu	Pro
	210					215					220				
Glu	Arg	Pro	Glu	Ala	Pro	Pro	Glu	Tyr	Ser	Glu	Val	Val	Ala	Asp	Thr
225					230					235				240	
Glu	Glu	Ala	Ala	Leu	Gly	Gln	Ser	Pro	Phe	Pro	Leu	Pro	Gln	Asp	Pro
				245					250					255	
Asp	Met	Ser	Leu	Glu	Gly	Pro	Phe	Phe	Ala	Tyr	Ile	Gln	Glu	Phe	Arg
			260					265					270		
Tyr	Arg	Pro	Pro	Pro	Leu	Tyr	Ser	Glu	Glu	Asp	Pro	Asn	Pro	Leu	Leu
	275					280						285			
Gly	Asp	Met	Arg	Pro	Arg	Cys	Met	Thr	Cys						
290						295									

<210> 3059

<211> 1411

<212> DNA

<213> Homo sapiens

<400> 3059

```

ntctagaacc aggaaggcgc tgagcttaaa ctgaagcaag ttcggtggac gccggcgggcg
60
ccctgatcta aagaaacgac tcagggactg cggcgcttgc acgtcaacgg gaggtgtgag
120
cccaaaggtc tggaccacaga aatgggacgt cggatcatcag atactgaaga agaaagcaga
180
agcaagagaa aaaagaaaca ccgtagacgg tctcctcga gcagttcttc agatagtaga
240
acatacagcc gaaagaaagg aggaaggaaa tcaagatcaa agtcaagatc ttggtccaga
300
gatcttcagc ctctgttcaca ttcttatgat agaagacgca ggcacgcgac aagcagtagc
360
tcttcttatg gctccagaag gaaacgaagt cgaagtcggt caaggggtcg agggaaatcc
420
tatagagttc agaggtctag gtcaaaaagc agaacaagaa ggtccaggtc aagacctcgt
480
ctccgttctc atagtcgtag cagtgaagg tccagtcaca gaagaacgcg tagtcgggtc
540
cgggatatag aacgacgtaa gggcagagat aaagagaaaa gagaaaagga gaaggataaa
600
gggaaggaca aggaattaca taacatcaaa cgtggggaat ctggaaacat caaagctgga
660
ttagaacatc tgccaccagc tgaacaggcc aaagccagac tacagctggt tcttgaagct
720
gctgcaaaaag ctgatgaagc attgaaagcc aaagaaagaa atgaggaaga agcaaagaga
780
agaaaggagg aagaccaagc caccctggta gaacaagtaa aaagagtaaa agaaattgaa
840
gctattgaaa gtgattcttt tggttcagcag acattcagat caagtaaaga agtcaaaaaag
900
tcagtggaac ctagtgaagt gaaacaagca acttcaacat caggaccagc atcagcagtt
960
gctgatccac ccagtactga aaaagaaata gatcctacca gcatccctac tgctatcaag
1020

```

taccaagatg acaattccct ggcccatcca aatttattta tcgagaaagc tgatgctgag
 1080
 gaaaaatggt tcaagagatt aattgctctc cgacaagaaa gactaatggg cagtcctgtg
 1140
 gcctaagtaa tatacatata gttggattgg attgtcagca gtaacattgg aaatttaggt
 1200
 ttttaaattcc caatattaac tttttactct taaaaagaat tttgctgatt atatataaag
 1260
 gtagtctcat ttcatttgtc tctcatgtag gcttgaatat ttgttaattt gaattaaatc
 1320
 aaacattgta aaaattaaaa caaaatttaa gattgcatga aaatgttata ctgttaataa
 1380
 agctaaacat aaataagtct gttaaaaaaa a
 1411

<210> 3060

<211> 334

<212> PRT

<213> Homo sapiens

<400> 3060

Met	Gly	Arg	Arg	Ser	Ser	Asp	Thr	Glu	Glu	Glu	Ser	Arg	Ser	Lys	Arg	1	5	10	15
Lys	Lys	Lys	His	Arg	Arg	Arg	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Asp	Ser	20	25	30	
Arg	Thr	Tyr	Ser	Arg	Lys	Lys	Gly	Arg	Lys	Ser	Arg	Ser	Lys	Ser		35	40	45	
Arg	Ser	Trp	Ser	Arg	Asp	Leu	Gln	Pro	Arg	Ser	His	Ser	Tyr	Asp	Arg	50	55	60	
Arg	Arg	Arg	His	Arg	Ser	Ser	Ser	Ser	Ser	Ser	Tyr	Gly	Ser	Arg	Arg	65	70	75	80
Lys	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Gly	Arg	Gly	Lys	Ser	Tyr	Arg	Val	85	90	95	
Gln	Arg	Ser	Arg	Ser	Lys	Ser	Arg	Thr	Arg	Arg	Ser	Arg	Ser	Arg	Pro	100	105	110	
Arg	Leu	Arg	Ser	His	Ser	Arg	Ser	Ser	Glu	Arg	Ser	Ser	His	Arg	Arg	115	120	125	
Thr	Arg	Ser	Arg	Ser	Arg	Asp	Arg	Glu	Arg	Arg	Lys	Gly	Arg	Asp	Lys	130	135	140	
Glu	Lys	Arg	Glu	Lys	Glu	Lys	Asp	Lys	Gly	Lys	Asp	Lys	Glu	Leu	His	145	150	155	160
Asn	Ile	Lys	Arg	Gly	Glu	Ser	Gly	Asn	Ile	Lys	Ala	Gly	Leu	Glu	His	165	170	175	
Leu	Pro	Pro	Ala	Glu	Gln	Ala	Lys	Ala	Arg	Leu	Gln	Leu	Val	Leu	Glu	180	185	190	
Ala	Ala	Ala	Lys	Ala	Asp	Glu	Ala	Leu	Lys	Ala	Lys	Glu	Arg	Asn	Glu	195	200	205	
Glu	Glu	Ala	Lys	Arg	Arg	Lys	Glu	Glu	Asp	Gln	Ala	Thr	Leu	Val	Glu	210	215	220	
Gln	Val	Lys	Arg	Val	Lys	Glu	Ile	Glu	Ala	Ile	Glu	Ser	Asp	Ser	Phe	225	230	235	240
Val	Gln	Gln	Thr	Phe	Arg	Ser	Ser	Lys	Glu	Val	Lys	Lys	Ser	Val	Glu	245	250	255	
Pro	Ser	Glu	Val	Lys	Gln	Ala	Thr	Ser	Thr	Ser	Gly	Pro	Ala	Ser	Ala				

	260		265		270										
Val	Ala	Asp	Pro	Pro	Ser	Thr	Glu	Lys	Glu	Ile	Asp	Pro	Thr	Ser	Ile
	275		280		285										
Pro	Thr	Ala	Ile	Lys	Tyr	Gln	Asp	Asp	Asn	Ser	Leu	Ala	His	Pro	Asn
	290		295		300										
Leu	Phe	Ile	Glu	Lys	Ala	Asp	Ala	Glu	Glu	Lys	Trp	Phe	Lys	Arg	Leu
305			310		315									320	
Ile	Ala	Leu	Arg	Gln	Glu	Arg	Leu	Met	Gly	Ser	Pro	Val	Ala		
			325		330										

<210> 3061

<211> 1554

<212> DNA

<213> Homo sapiens

<400> 3061

```

nncgggagcg gtggcgcttc cccgccttcc ctccctcccg ggccctgggcg cccagccgga
60
caggtgagcg gcagccaggt atggcgttga cggatgatgt ggccggggcca gcgcctggg
120
gcttccttat cacagggggc agggatttcc acacgcccac catggtgact aaggtggccg
180
agcggggcaa agccaaggac gctgacctcc ggccctggaga cataatcgtg gccatcaacg
240
gggaaagcgc ggagggcatg ctgcatgccg agggccagag caagatccgc cagagcccct
300
cgccccctgc gctgcagctg gaccggcttc aggtacgtc tccagggcag accaatgggg
360
acagtcctt ggaagtgtg gcgactcgt tccagggctc cgtgaggaca tacactgaga
420
gtcagtcctc cttaaggctc tcctactcca gcccaacctc cctcagcccc agggccggca
480
gcccccttcc accaccaccc tctagcagct ccctcactgg agaggcggcc atcagcgctg
540
cttcagagt ctggcatgtt ccccgggcct ccccgctgct gaccgcctgt cctactcagg
600
ccgccccgga agccgacacg cggcctcggc gccgctggcg actcggcggt gctggtgctg
660
ccgccttccc cgggccccctg ttctccagg cccagcatgg actcggaagg gggaagcctc
720
ctcctggacg aggactcggg agtcttcaag atgctgcagg aaaatcgcca gggacgggcg
780
gccccccgac agtccagctc ctttcgactc ttgcaggaag ccttgagggc tgaggagaga
840
ggtggcacgc cagccttctt gccagctca ctgagcccc agtcctccct gccgcctcc
900
agggccctgg ccacccctcc caagctccac acttgtgaga agtgcagtac cagcatcgcg
960
aaccaggctg tgcgcatcca ggagggcccg taccgccacc ccggctgcta cacctgtgac
1020
gactgtgggc tgaacctgaa gatgcgcggg cacttctggg tgggtgacga gctgtactgt
1080
gagaagcatg cccgccagcg ctactccgca cctgccaccc tcagctctcg ggccctgagcc
1140

```

cgccatgccc tcagcctgcc tcactgctgg gccagggtca tgcctatata agttggcatg
 1200
 gcagggacaa tgggtgggcag ttgctcttac atgagctaag tttggagacc tgaggccccc
 1260
 ttgtcctcgc tgggtggggcc aagggtctggg acctgtcttg gactgtggga gactcaccct
 1320
 caccttgcca ggcctctccc ctgcaggact ggcattgcac tagtctgagg tggccactgc
 1380
 ctttgatcaa cctttgtgtg cgagggtcta agtagggctc aacacagaag tgggaaggag
 1440
 aggggtgggc caggggctaa tgggtgtcact gtgtaaagtt tttgacatac tagctctata
 1500
 aatatatgaa tatggacaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa
 1554

<210> 3062
 <211> 146
 <212> PRT
 <213> Homo sapiens

<400> 3062
 Met Asp Ser Glu Gly Gly Ser Leu Leu Leu Asp Glu Asp Ser Glu Val
 1 5 10 15
 Phe Lys Met Leu Gln Glu Asn Arg Glu Gly Arg Ala Ala Pro Arg Gln
 20 25 30
 Ser Ser Ser Phe Arg Leu Leu Gln Glu Ala Leu Glu Ala Glu Glu Arg
 35 40 45
 Gly Gly Thr Pro Ala Phe Leu Pro Ser Ser Leu Ser Pro Gln Ser Ser
 50 55 60
 Leu Pro Ala Ser Arg Ala Leu Ala Thr Pro Pro Lys Leu His Thr Cys
 65 70 75 80
 Glu Lys Cys Ser Thr Ser Ile Ala Asn Gln Ala Val Arg Ile Gln Glu
 85 90 95
 Gly Arg Tyr Arg His Pro Gly Cys Tyr Thr Cys Ala Asp Cys Gly Leu
 100 105 110
 Asn Leu Lys Met Arg Gly His Phe Trp Val Gly Asp Glu Leu Tyr Cys
 115 120 125
 Glu Lys His Ala Arg Gln Arg Tyr Ser Ala Pro Ala Thr Leu Ser Ser
 130 135 140
 Arg Ala
 145

<210> 3063
 <211> 386
 <212> DNA
 <213> Homo sapiens

<400> 3063
 nntctagagc tcctctctgg ccttgcaaag gtaaaagtga tgggtgactc aggagaccgg
 60
 aagcgagcca tcagttctgt gtgcacctac attgtttatc agtgtagtcg gccagctcct
 120
 ttacactcca gggatctgca ctccatgata gtggcagctt ttcagtgtct ctgtgtctgg
 180

ctgacagagc accctgatat gcttgatgaa aaggactacc ttaaggaagt actggagatt
 240
 gtggaactgg gtatctcagg aagtaagtcc aagaacaatg agcaagaggt caagtacaaa
 300
 ggagataagg agccaaaccc tgcattctatg agggtaaagg atgctgctga agccacccta
 360
 acatggtatg gaagtgaccg cacagg
 386

<210> 3064

<211> 128

<212> PRT

<213> Homo sapiens

<400> 3064

Xaa	Leu	Glu	Leu	Leu	Ser	Gly	Leu	Ala	Lys	Val	Lys	Val	Met	Val	Asp
1				5					10					15	
Ser	Gly	Asp	Arg	Lys	Arg	Ala	Ile	Ser	Ser	Val	Cys	Thr	Tyr	Ile	Val
			20					25					30		
Tyr	Gln	Cys	Ser	Arg	Pro	Ala	Pro	Leu	His	Ser	Arg	Asp	Leu	His	Ser
			35				40					45			
Met	Ile	Val	Ala	Ala	Phe	Gln	Cys	Leu	Cys	Val	Trp	Leu	Thr	Glu	His
	50					55				60					
Pro	Asp	Met	Leu	Asp	Glu	Lys	Asp	Tyr	Leu	Lys	Glu	Val	Leu	Glu	Ile
65					70					75				80	
Val	Glu	Leu	Gly	Ile	Ser	Gly	Ser	Lys	Ser	Lys	Asn	Asn	Glu	Gln	Glu
			85					90					95		
Val	Lys	Tyr	Lys	Gly	Asp	Lys	Glu	Pro	Asn	Pro	Ala	Ser	Met	Arg	Val
			100					105					110		
Lys	Asp	Ala	Ala	Glu	Ala	Thr	Leu	Thr	Trp	Tyr	Gly	Ser	Asp	Arg	Thr
		115					120						125		

<210> 3065

<211> 2104

<212> DNA

<213> Homo sapiens

<400> 3065

gggggacagg ccaggagggg ggccatggag gaggagcggg ggtcggcgct ggcgcccgag
 60
 tcggcgctgg agaagaacgt ggccgagctg accgtcatgg acgtgtacga catcgcgctg
 120
 cttgtgggac acgagttcga gcggggtcatt gaccagcacg gctgcgaggc catcgcgcg
 180
 ctcatgccca aggtcgtgcg cgtcctggag atcctggagg tgctggtcag ccgccaccac
 240
 gtcgcccccg agctggacga gctgcgcctg gagctggacc gcctgcgcct ggagaggatg
 300
 gaccgcatcg agaaggagcg caagcaccag aaggagctgg agctgggtgga ggatgtgtgg
 360
 cgaggggagg cgcaggacct cctctcccag atcgcccagc tgcaggagga gaacaagcag
 420
 ctcattgacca acctctccca caaggatgtc aacttctcag aggaggagtt ccagaagcat
 480

gaaggcatgt cagagcggga gcgacaggtg atgaagaagc tgaaggaggt ggtggacaaa
540
caacgcgacg agatccgcgc caaggacagg gagctgggcc tgaaaaatga ggacgttgag
600
gctttacagc agcagcagac acggctgatg aagatcaacc atgaccttcg gcaccggggtc
660
acggtggtgg agggccaggg gaaagccctg atcgaaacaga aggtggagct ggaggcagac
720
ctgcagacca aggagcagga gatgggcagc ctgcgagcag agctggggaa gttgcgagag
780
aggctgcagg gggagcacag ccagaatggg gaggaggagc ctgagacgga gccgggtggga
840
gaggagagca tctccgacgc agagaagggt gccatgngat ctcaaggacc cncaaccgcc
900
cccggttcac cctgcaggag ctgcgggacg tgctgcacga gaggaacgna gctcaagtcc
960
aagggtgttct tgctgcagga ggagctggct tactataaga gtgaagaaat ggaagaggaa
1020
aaccgaatac cccaaccccc acccatcgcc caccgagga cgtccccca gccggagtcg
1080
ggcatcaagc gactgtttag cttcttctcc cgagataaga agcgcctggc caacacacag
1140
agaaacgtgc acatccagga gtcctttgga cagtgggcaa acaccaccg cgatgacggc
1200
tacacagagc aaggacagga agccctgcag catctgtgac cttggcccat ctccaccctc
1260
caacctggac tgcccgccac cagcgcctgc aaccgaactg cagcccaggg gtcattgctg
1320
cctcaagcct ctcggtgcag atgcaccctg aaaactgacc cctcaaacag actgtctgat
1380
ttgaggatgg acattgaaaa actgacgcca aactctaaag aaatgtttat ttatacccg
1440
ggctatcact gtttctaata gatgactctg atcccgtagg atatatattt aataatccca
1500
caaacggagg ccagacttct gcgttaactt cagtaacaca agcttcttta agccaaatac
1560
atcacttgcc actatcattg ctgtttgact tgctttgtat aaaatgctat gtgtagaggt
1620
tttattatca caggtgacat agttcagcag gaggcatgga agggctagat cttcattagt
1680
tacattcatg aaattgtgat ggtaacgtat tatacagaat gtatccatca ggcagacaag
1740
gggtctgaag tcacaggctc agtagcccaa ctacagacaca aagccacaga caatatggat
1800
gatggtcctc ttaccagaa actggagaca actttgcagg caccctggct gcgttctcga
1860
taatgcctag agcatgtagc aatgttcaag gcaggcgcct tggaatctgc tgtgagttat
1920
gcagtactaa ccaaacaaag ttgctaagga tgagatgttg caacatttct tgtgtgcact
1980
tttttttctt gacatctttt tttcctttta ggattcatta agtcatatac ttagtccctt
2040
gcaaagaaga agacagatgt ccagagcag actgaaagcg gggcgtggga tcctaggcaa
2100

tgca
2104

<210> 3066
<211> 183
<212> PRT
<213> Homo sapiens

<400> 3066
Leu Ile Glu Gln Lys Val Glu Leu Glu Ala Asp Leu Gln Thr Lys Glu
1 5 10 15
Gln Glu Met Gly Ser Leu Arg Ala Glu Leu Gly Lys Leu Arg Glu Arg
20 25 30
Leu Gln Gly Glu His Ser Gln Asn Gly Glu Glu Glu Pro Glu Thr Glu
35 40 45
Pro Val Gly Glu Glu Ser Ile Ser Asp Ala Glu Lys Val Ala Met Xaa
50 55 60
Ser Gln Gly Pro Xaa Thr Ala Pro Gly Ser Pro Cys Arg Ser Cys Gly
65 70 75 80
Thr Cys Cys Thr Arg Gly Thr Xaa Leu Lys Ser Lys Val Phe Leu Leu
85 90 95
Gln Glu Glu Leu Ala Tyr Tyr Lys Ser Glu Glu Met Glu Glu Glu Asn
100 105 110
Arg Ile Pro Gln Pro Pro Pro Ile Ala His Pro Arg Thr Ser Pro Gln
115 120 125
Pro Glu Ser Gly Ile Lys Arg Leu Phe Ser Phe Phe Ser Arg Asp Lys
130 135 140
Lys Arg Leu Ala Asn Thr Gln Arg Asn Val His Ile Gln Glu Ser Phe
145 150 155 160
Gly Gln Trp Ala Asn Thr His Arg Asp Asp Gly Tyr Thr Glu Gln Gly
165 170 175
Gln Glu Ala Leu Gln His Leu
180

<210> 3067
<211> 645
<212> DNA
<213> Homo sapiens

<400> 3067
ncagctgcag gtgggggagg ggacgagagc cacacccagc cgagcgggcc accagcggct
60
atgtcaggct caccgcgcc caaagcagga tatgcgtccc caaaccgagc gcagggaccc
120
tcnnagttc tagtccatca agcacgggag ccgactgcgg gctcaccacc ctgttctcta
180
ccccgacctg acttgcagcc cccgtccaca cctccccgc cgttcacaa ggagcaaaaa
240
aagtcagacc cacccccacc cccaccagga aaattcaagt ccttcctccc accgcggagc
300
ccaggaaatt cagctctagg tcccaggcga ggggtggggat ggatcgcggc cggcggcgcc
360
ccggccatgc ctgcgtccacc ttcgggagcc ggcgacagg agatccccag ggatctcgcg
420

tgtgcgccct acccaccccc gggggcagga cgggggagcg agcaccgatc ggcgccgggg
480
cgtcgatgcg gaagcaagga gccggaggcg gccgctagcc gccctccgag cccagcggaa
540
gaggagccgc cgcccggtgtc cgctgaggag actccgccta gcccgggcgc gccaccgcgg
600
ggcgagtggg gatgagggga cggagcgagg acggctccca cgcgt
645

<210> 3068

<211> 204

<212> PRT

<213> Homo sapiens

<400> 3068

Xaa	Ala	Ala	Gly	Gly	Gly	Gly	Asp	Glu	Ser	His	Thr	Gln	Pro	Ser	Gly
1				5					10					15	
Pro	Pro	Ala	Ala	Met	Ser	Gly	Ser	Pro	Ala	Pro	Lys	Ala	Gly	Tyr	Ala
		20					25					30			
Ser	Pro	Asn	Arg	Ala	Gln	Gly	Pro	Ser	Xaa	Val	Leu	Val	His	Gln	Ala
		35				40					45				
Arg	Glu	Pro	Thr	Ala	Gly	Ser	Pro	Pro	Cys	Ser	Leu	Pro	Arg	Pro	Asp
	50				55						60				
Leu	Gln	Pro	Pro	Ser	Thr	Pro	Pro	Pro	Pro	Val	His	Lys	Glu	Gln	Lys
65				70					75					80	
Lys	Ser	Asp	Pro	Pro	Pro	Pro	Pro	Gly	Lys	Phe	Lys	Ser	Phe	Leu	
			85					90					95		
Pro	Pro	Arg	Ser	Pro	Gly	Asn	Ser	Ala	Leu	Gly	Pro	Arg	Arg	Gly	Trp
		100				105						110			
Gly	Trp	Ile	Ala	Ala	Gly	Gly	Ala	Pro	Ala	Met	Pro	Arg	Pro	Pro	Ser
	115					120						125			
Gly	Ala	Gly	Asp	Arg	Glu	Ile	Pro	Arg	Asp	Leu	Ala	Cys	Ala	Pro	Tyr
	130				135					140					
Pro	Pro	Pro	Gly	Ala	Gly	Arg	Gly	Ser	Glu	His	Arg	Ser	Ala	Pro	Gly
145				150					155					160	
Arg	Arg	Cys	Gly	Ser	Lys	Glu	Pro	Glu	Ala	Ala	Ala	Ser	Arg	Pro	Pro
			165					170					175		
Ser	Pro	Ala	Glu	Glu	Glu	Pro	Pro	Pro	Val	Ser	Ala	Glu	Glu	Thr	Pro
		180						185					190		
Pro	Ser	Pro	Ala	Pro	Pro	Pro	Arg	Gly	Glu	Trp	Gly				
	195					200									

<210> 3069

<211> 1561

<212> DNA

<213> Homo sapiens

<400> 3069

tttttttaaa attgcagtgg gtacttttatt aagaatttat tttaccatct agccattcaa
60
aacatcttta catcaacaaa cacagcagtt tgactattga aatcataagc gatttatctt
120
gaaaagggtta tatttgtagg tggatgcaag tatattggag aaatatttct atcaaaatca
180

ctgggttttgt taggagtatt ttgatttttc tattttttacg ctgggaaaaa aattaaaaca
240
agtatgtcag tgttcatttt atgggatagt tggcttcact gtgtttgtca tgtttgtccg
300
aattacagct gtttatcttg caactttaag attaattaaa tgcaaatgta actctgtgaa
360
tcatgggaat acctgccaga cctcttatta ataccttcac ttaaaacccc ctgtgcctga
420
gagtcattaa tttgctaaaa gaaaagtgtt aaagcagccc tttgcccaca aacaattctg
480
cgatggctgc ccaattaatc ccaaagcatt ctgatcctcc tttcaggcct cgtggccctt
540
tgaggacaca agaaggctcc gatgataacc tggcaaccta ggtagaaacc cagccaagtg
600
tgagcgtttg aagctgcagt ttggctgcca tcgtgtcggc gaaaagaaag aattcaggca
660
ccatgtcatc cagtacaaag gataaaaacg gattcaaccg gaaattcaat gtggcaccac
720
atatgggata catgagtgcg gttatacaac aggccacata ttttttttga acagtctcct
780
acatgtgatg ccgaggacat gtgtaaccat cataacgtct ctaggaatct gtatttaatt
840
tgagttgggg tgggtggcagg gattggagat ctgaagccgc cacaggtttg tggcagatgg
900
ctctgtgtca gctatgacaa gcagccaggc tcagcttcct ctgcagattt tcttttctct
960
ctgatcaggt aaatatgggc acactctgga aagttcttca gattctgcct taggctgcaa
1020
gtttgtgact tagcccatc tgtcacaaat cttccctagg ttctgttgta agcagagacc
1080
tgaatttacc atgtagggct gcccaagaaa acggagcgat ttcaccctta tagagatgtt
1140
ttcttataat atctggtctc ttgcagaaat tctggagcct ttttgaaagc tgttcagggtg
1200
tagaatacag atattcagct ggaaatattt cgggataaac caaatcttta ggacaaagtg
1260
ggtaacaccc acagtacaca gtttccaaca ttgccactcc aaagaattca tgcttagctg
1320
ttgagatgac aacatcagcc acgcacagta cttggaaata gtcattcttg ctgggtaagt
1380
agccccagtg taagacagaa gatcccaatg cttttttggc ctctgaaaaa atatctggga
1440
catctgtgaa ggtttctcca agtacagaca cgtggaaatt gagtcctaag tctttaagat
1500
gcattaatac cttaaaaaag ctttctggat ctttatcatg ctcccacctg tgaggccaga
1560
c
1561

<210> 3070

<211> 153

<212> PRT

<213> Homo sapiens

<400> 3070

Met His Leu Lys Asp Leu Gly Leu Asn Phe His Val Ser Val Leu Gly
 1 5 10 15
 Glu Thr Phe Thr Asp Val Pro Asp Ile Phe Ser Glu Ala Lys Lys Ala
 20 25 30
 Leu Gly Ser Ser Val Leu His Trp Gly Tyr Leu Pro Ser Lys Asp Asp
 35 40 45
 Tyr Phe Gln Val Leu Cys Val Ala Asp Val Val Ile Ser Thr Ala Lys
 50 55 60
 His Glu Phe Phe Gly Val Ala Met Leu Glu Ala Val Tyr Cys Gly Cys
 65 70 75 80
 Tyr Pro Leu Cys Pro Lys Asp Leu Val Tyr Pro Glu Ile Phe Pro Ala
 85 90 95
 Glu Tyr Leu Tyr Ser Thr Pro Glu Gln Leu Ser Lys Arg Leu Gln Asn
 100 105 110
 Phe Cys Lys Arg Pro Asp Ile Ile Arg Lys His Leu Tyr Lys Gly Glu
 115 120 125
 Ile Ala Pro Phe Ser Trp Ala Ala Leu His Gly Lys Phe Arg Ser Leu
 130 135 140
 Leu Thr Thr Glu Pro Arg Glu Asp Leu
 145 150

<210> 3071

<211> 3343

<212> DNA

<213> Homo sapiens

<400> 3071

gccgggatgg ggacgcccgt gcaccctgt tgtggcgtgg tttgggagca cagcaaaggc
 60
 cagactctac cctggagact gcagagctgg ggatgaggct ttttcagct cctcttggg
 120
 atgttctctg ggatacttcc gcggccgcgc ccctgcacag cccgccgcag aggtaaggct
 180
 ggcctctctg cagtcagagg tctgagctct gccatgggga taggggtgtc tttattactg
 240
 cagttttctc taacacctgg gggctaccgg agtgtgggcc gaagcaggcg ctgcagccgc
 300
 ggatagtatc cccaggaaca tccccaaagag gagctggaaa aagcctcatc cccagctctg
 360
 cagtctccag gggagctcag tgtctgtttg tccagcttct cagagttgct gtgcagctcg
 420
 gatgtggcat aggaaacagc agacacaggg agagggcagc ataaggcact gtagggagca
 480
 gtggccacat tttctgcaga ggaagaaccg atgctggaac gtcgttgagc gggccccctg
 540
 gccatgggcc tggcccagcc ccgactcctt tctgggccct cccaggagtc accccagacc
 600
 ctggggaagg agtcccgcgg gctgaggcaa caaggcacgt cagtggccca gtctgggtgcc
 660
 caagccccag gcagggccca tcgctgtgcc cactgtcgaa ggcacttccc tggctgggtg
 720
 gctctgtggc ttcacaccg ccggtgccag gcccggtgc ccttgccctg cctgagtg
 780

ggccgctcgct ttcgccatgc ccccttctta gcaactgcacc gccaggtcca tgctgctgcc
840
acccagacc tgggctttgc ctgccacctc tgtgggcaga gcttccgagg ctgggtggcc
900
ctggttctgc atctgcgggc ccattcagct gcaaagcggc ccatcgcttg tcccaaagtgc
960
gagagacgct tctggcgacg aaagcagctt cgagctcatc tgcggcgggtg ccaccctccc
1020
gccccggagg cccggccctt catatgcggc aactgtggcc ggagctttgc ccagtgggac
1080
cagctagtgtg cccacaagcg ggtgcacgta gctgaggccc tggaggaggc cgcagccaag
1140
gctctggggc cccggcccag gggccgcccc gcggtgaccg cccccggcc cgggtggagat
1200
gccgtcgacc gccccttcca gtgtgcctgt tgtggcaagc gcttccggca caagcccaac
1260
ttgatcgctc accgccgctg gcacacgggc gagcggcccc accagtgcgc cgagtgcggg
1320
aagcgcttta ccaataagcc ctatctgact tcgcaccggc gcatccacac cggcgagaag
1380
ccctacccgt gcaaagagtg cggccgcccgc ttccggcaca aaccaaacct gctgtctcac
1440
agcaagattc acnnaagcga tccgaggggt cggcccaggc cggccccggc ccggggagcc
1500
cccagctgcc agccggcccc caggagtccg cggccgagcc cccccggcg gtacctctga
1560
aaccggccca ggagccgccc ccaggggccc cgccagagca cccgcnagga cccgatcgaa
1620
gccccccct cctctacag ctgcgacgac tgcggcagga gcttccggct ggagcgcttc
1680
ctgcgggccc accagcggca gcacaccggg gagcggccct tcacctgcgc cgagtgcggg
1740
aagaacttcg gcaagaagac gcacctggtg gcgcactcgc gcgtgcactc cggcgagcgg
1800
cccttcgcct gcgaggagtg cggccgcccgc ttctcccagg gcagccatct ggcggcgcat
1860
cggcgggacc acgccccga tcggcccttc gtgtgtcccg actgcggcaa ggccttccgc
1920
cacaaacctt acctggcggc gcaccggcgc atccacaccg gcgagaagcc ctacgtctgc
1980
cccgactgcg gcaaagcctt cagccagaag tccaacctgg tgcgcaccg gcgcattcac
2040
acgggcgagc ggccctacgc ctgtcccgcac tgcgaccgca gcttcagcca gaagtccaac
2100
ctcatcacc accgcaagag ccacatccgg gacggcgcct tctgctgtgc catctgtggc
2160
cagaccttcg acgacgagga gagactcctg gcccaccaga agaagcacga tgtctgagac
2220
ggtggggcggg gccgtgttgg ctgagagagg gctgggggtcc ttcgtggtgg gagtgcagc
2280
gggctggggg tgctgccta gtgctggagt aggggacaaat gggaatccta gaggggatgg
2340
aagacgcggg gagtgcgctg ggtgggcccct gctagcgaga gaggtcaacc ccggtggcca
2400

gggaaccac ttccaagcgc agggacgccg gcctccagct ggtgtgtgct aaggctccgt
 2460
 cctgactgcc ctgtgccctg gaaaagcagc aatagcatcc gccccttaga gccctctggc
 2520
 tagaggagcc accagtggaa aggaagaccc tccatcctct ggtattaacg ccttaatgcc
 2580
 cctgtctttt actgtaagtt acttaagatc atttttggaa gcaggcgtgg tagagtccgt
 2640
 taaatgaatg ctctgggcta gatacagctt ggagaacctg ctggccttgt tagacagcac
 2700
 ttgggccttt gccagcagca agaggtgaag cgaagccact cttacctctc cttccccctc
 2760
 ccacctgccc cctgcgtagg caccagact tggagagacc cgtctgctgt tagtacttcc
 2820
 atcctcttcc tccccaaaga gcagacccca aggcatttac tccttggctt gtctcgcttt
 2880
 atctgtcgcc cctcccagcg ctgagagcct cccctggctg tcagcagcac tgtgtccagg
 2940
 ctcttgtctg aacaccgcag cccctccttc gctccttcca gagctcagca tgtcacggca
 3000
 aggactgccg cattggtgat ggagggccag ctgaggggaa gttgctggtg agtttccttt
 3060
 tctccatttc tagcatatgg acacctggcc tctgcttgag cacttaggtg acaggaactt
 3120
 cgcacctcc tgaggccctg gatgattcta attgttagaa attctaattg ttagaaatcc
 3180
 ttccttataa tgaatgaatt ctgctttcct ataatttcta cctattgggc cttgttctgt
 3240
 tctctggaac taaacagaac aaccatttac cctccttttt caaactagag aataaagatt
 3300
 tgggttttaga aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa
 3343

<210> 3072

<211> 349

<212> PRT

<213> Homo sapiens

<400> 3072

Met	Leu	Glu	Arg	Arg	Cys	Arg	Gly	Pro	Leu	Ala	Met	Gly	Leu	Ala	Gln
1				5					10					15	
Pro	Arg	Leu	Leu	Ser	Gly	Pro	Ser	Gln	Glu	Ser	Pro	Gln	Thr	Leu	Gly
			20					25					30		
Lys	Glu	Ser	Arg	Gly	Leu	Arg	Gln	Gln	Gly	Thr	Ser	Val	Ala	Gln	Ser
		35					40					45			
Gly	Ala	Gln	Ala	Pro	Gly	Arg	Ala	His	Arg	Cys	Ala	His	Cys	Arg	Arg
	50					55					60				
His	Phe	Pro	Gly	Trp	Val	Ala	Leu	Trp	Leu	His	Thr	Arg	Arg	Cys	Gln
65					70					75				80	
Ala	Arg	Leu	Pro	Leu	Pro	Cys	Pro	Glu	Cys	Gly	Arg	Arg	Phe	Arg	His
			85					90						95	
Ala	Pro	Phe	Leu	Ala	Leu	His	Arg	Gln	Val	His	Ala	Ala	Ala	Thr	Pro
			100					105						110	
Asp	Leu	Gly	Phe	Ala	Cys	His	Leu	Cys	Gly	Gln	Ser	Phe	Arg	Gly	Trp


```
<400> 3073
nngccctgcc tgaggcgaga gctgaagctg ctcgagtcca tcttcaccg cggccacgag
60
cgcttccgca ttgccagcgc ctgcctggac gagctgagct gcgagttcct gctggctggg
120
gccggagggg ccggggcggg ggccgcgccc ggaccgcac tccccccacg ggggtcgggtg
180
cctggggatc ctgtccgcat ccactgcaac atcacggagt cataccctgc tgtgcccccc
240
atctggtcgg tggagtctga tgaccctaac ttggctgctg tcttgagag gctggtggac
300
ataaagaaaag ggaataactct gctattgcag catctgaaga ggatcatctc cgacctgtgt
360
aaactctata acctccctca gcatccagat gtggagatgc tggatcaacc cttgccagca
420
gagcagtgca cacaggaaga cgtgtcttca gaagatgaag atgaggagat gcctgaggac
480
acagaagact tagatcacta tgaaatgaaa gaggaagagc cagctgaggg caagaaatct
540
```

gaagatgatg gcattggaaa agaaaacttg gccatcctag agaaaattaa aaagaaccag
 600
 aggcaagatt acttaaatgg tgcagtgtct ggctcgggtgc aggccactga cgggctgatg
 660
 aaggagctcc agggatatat taccgnttca cagagtttca aaggcggaaa ctatgncagt
 720
 tcgaactcgt ggaatgacag tctgtatggt tgggatgttc aactcctcaa agttgaccag
 780
 ggcagcgttt a
 791

<210> 3074

<211> 263

<212> PRT

<213> Homo sapiens

<400> 3074

Xaa	Pro	Cys	Leu	Arg	Arg	Glu	Leu	Lys	Leu	Leu	Glu	Ser	Ile	Phe	His
1				5				10						15	
Arg	Gly	His	Glu	Arg	Phe	Arg	Ile	Ala	Ser	Ala	Cys	Leu	Asp	Glu	Leu
			20					25					30		
Ser	Cys	Glu	Phe	Leu	Leu	Ala	Gly	Ala	Gly	Gly	Ala	Gly	Ala	Gly	Ala
		35					40					45			
Ala	Pro	Gly	Pro	His	Leu	Pro	Arg	Gly	Ser	Val	Pro	Gly	Asp	Pro	
	50					55				60					
Val	Arg	Ile	His	Cys	Asn	Ile	Thr	Glu	Ser	Tyr	Pro	Ala	Val	Pro	Pro
65					70					75				80	
Ile	Trp	Ser	Val	Glu	Ser	Asp	Asp	Pro	Asn	Leu	Ala	Ala	Val	Leu	Glu
				85					90					95	
Arg	Leu	Val	Asp	Ile	Lys	Lys	Gly	Asn	Thr	Leu	Leu	Leu	Gln	His	Leu
			100					105					110		
Lys	Arg	Ile	Ile	Ser	Asp	Leu	Cys	Lys	Leu	Tyr	Asn	Leu	Pro	Gln	His
		115				120						125			
Pro	Asp	Val	Glu	Met	Leu	Asp	Gln	Pro	Leu	Pro	Ala	Glu	Gln	Cys	Thr
	130					135					140				
Gln	Glu	Asp	Val	Ser	Ser	Glu	Asp	Glu	Asp	Glu	Glu	Met	Pro	Glu	Asp
145					150					155				160	
Thr	Glu	Asp	Leu	Asp	His	Tyr	Glu	Met	Lys	Glu	Glu	Glu	Pro	Ala	Glu
			165						170					175	
Gly	Lys	Lys	Ser	Glu	Asp	Asp	Gly	Ile	Gly	Lys	Glu	Asn	Leu	Ala	Ile
			180					185					190		
Leu	Glu	Lys	Ile	Lys	Lys	Asn	Gln	Arg	Gln	Asp	Tyr	Leu	Asn	Gly	Ala
	195						200					205			
Val	Ser	Gly	Ser	Val	Gln	Ala	Thr	Asp	Arg	Leu	Met	Lys	Glu	Leu	Gln
	210					215					220				
Gly	Tyr	Ile	Thr	Xaa	Ser	Gln	Ser	Phe	Lys	Gly	Gly	Asn	Tyr	Xaa	Ser
225					230					235				240	
Ser	Asn	Ser	Trp	Asn	Asp	Ser	Leu	Tyr	Gly	Trp	Asp	Val	Gln	Leu	Leu
			245						250					255	
Lys	Val	Asp	Gln	Gly	Ser	Val									
			260												

<210> 3075

<211> 603

<212> DNA

<213> Homo sapiens

<400> 3075

```

ccccctggggg gaaaaaatTT tttaaaaaaa atgggtgggga aaaaccccccc cccgcccccc
60
ccctttttttt cccccgtggg ggccaaaaaa aaaaatgtgg gcccccaaaa aaaaaaaaaa
120
aaaaaaaaaaa aagtcttggg aggggggtcgg ttgggccagg tccacaggtg cacagagaag
180
tctacaggcc ttgcactggc agccaagatc atcaaagtga agaacgtaaa ggaccgggag
240
gatgtgaaga atgagggtcaa catcatgaac cagctcagcc acgtaaactt gatccaactt
300
tatgatgcgt ttgagagcaa gagcagcttc actctgatca tggagtatgt ggatggaggc
360
gaactctttg accggatcac ggatgagaag taccacctca ctgagttgga tgtggtcttg
420
ttcacgaggc agatctgtga ggggtgtgcat tacctgcatc agcactatat cctgcacctg
480
gacctcaagc ctgagaacat attgtgtgtc agccagacag ggcataaat taagatcatt
540
gactttgggc tggctagaag atacaagcct cgggagaagc taaaggtgaa ctttggtact
600
ccg
603

```

<210> 3076

<211> 201

<212> PRT

<213> Homo sapiens

<400> 3076

```

Pro Leu Gly Gly Lys Asn Phe Leu Lys Lys Met Val Gly Lys Asn Pro
1          5          10          15
Pro Pro Pro Pro Pro Phe Phe Ser Pro Val Gly Ala Lys Lys Lys Asn
20          25          30
Val Gly Pro Gln Lys Lys Lys Lys Lys Lys Lys Val Leu Gly Gly
35          40          45
Gly Arg Phe Gly Gln Val His Arg Cys Thr Glu Lys Ser Thr Gly Leu
50          55          60
Ala Leu Ala Ala Lys Ile Ile Lys Val Lys Asn Val Lys Asp Arg Glu
65          70          75          80
Asp Val Lys Asn Glu Val Asn Ile Met Asn Gln Leu Ser His Val Asn
85          90          95
Leu Ile Gln Leu Tyr Asp Ala Phe Glu Ser Lys Ser Ser Phe Thr Leu
100         105         110
Ile Met Glu Tyr Val Asp Gly Gly Glu Leu Phe Asp Arg Ile Thr Asp
115         120         125
Glu Lys Tyr His Leu Thr Glu Leu Asp Val Val Leu Phe Thr Arg Gln
130         135         140
Ile Cys Glu Gly Val His Tyr Leu His Gln His Tyr Ile Leu His Leu
145         150         155         160
Asp Leu Lys Pro Glu Asn Ile Leu Cys Val Ser Gln Thr Gly His Gln

```

	165		170		175
Ile Lys Ile Ile Asp Phe Gly Leu Ala Arg Arg Tyr Lys Pro Arg Glu					
	180		185		190
Lys Leu Lys Val Asn Phe Gly Thr Pro					
	195		200		

<210> 3077

<211> 1377

<212> DNA

<213> Homo sapiens

<400> 3077

```

ngctcgactg cgaattactg tttatgaggt gactcgctgg ttctatcggg ggacagtggg
60
acattctgaa gggaggcaag gaggcggact gagcgctccc aattggggag gatgctgggtg
120
gtggaggtgg cgaacggccg ctccctgggtg tggggagccg aggcggtgca ggccctccgg
180
gagcgcttgg gtgtgggggg ccgcacggta ggcgccctgc cccgcgggcc ccgccagaac
240
tcgcgcctgg gcctcccgt gctgctgatg cccgaagagg cgcggctctt ggccgagatc
300
ggcgccgtga ctctggtcag cgcgcccggt ccagactctc ggcaccacag cctggccctg
360
acatccttca agcgccagca agaggagagc ttccaggagc agagcgctt ggcagctgag
420
gcccgggaga ccgctcgtca ggagctcctg gagaagatta cggagggcca ggctgctaag
480
aagcagaaac tagaacaggc ttcaggggcc agctcaagcc aggaggccgg ctcgagccag
540
gctgccaaag aggatgagac cagtgatggc caggcttcgg gagagcagga ggaagctggc
600
ccctcgtctt cccaagcagg accctcaaat ggggtagccc ccttgcccag atctgctctc
660
cttggtccagc tggccactgc caggcctcga ccggtcaagg ccaggccctt ggactggcgt
720
gtccagtcta aagactggcc ccacgccggc cgccctgccc acgagctgcg ctacagtatc
780
tacagagacc tgtgggagcg aggcttcttc ctcaagtgcg ctggcaagtt cggaggtgac
840
ttcctgggtc atcctgggtga cccctccgc ttccacgcc attatatcgc tcagtgtggtg
900
gcccctgagg acaccatccc actccaagac ctggttgctg ctgggcgcct tgggaaccagc
960
gtcagaaaga ccctgctcct ctgttctccg cagcctgatg gtaaggtggg ctacacctcc
1020
ctgcaatggg ccagcctgca gtgaactcca gagacctagg ggatgtgggt gtgtcggcag
1080
caagagcctt tctggatggt cccagctct tctctgggag tctagaacat cctcctacct
1140
ttctccgcgg ttagtttttg attccaggtt ttogaacact acatcttttt tatgtttctt
1200
cttgtttcaa agcacttatt ggctgtgttt ttgtagttac ctattttcac actgtgagct
1260

```

tcccgagaat ggggcctggg ttgattcat ctgttttcta cagggtttta gtctcaggag
 1320
 gtctcaataa acttggtata taaatgttaa aaaaaaaaaa aaaaaaaaaa aaaaaaa
 1377

<210> 3078

<211> 310

<212> PRT

<213> Homo sapiens

<400> 3078

Met	Leu	Val	Val	Glu	Val	Ala	Asn	Gly	Arg	Ser	Leu	Val	Trp	Gly	Ala
1				5					10					15	
Glu	Ala	Val	Gln	Ala	Leu	Arg	Glu	Arg	Leu	Gly	Val	Gly	Gly	Arg	Thr
			20					25					30		
Val	Gly	Ala	Leu	Pro	Arg	Gly	Pro	Arg	Gln	Asn	Ser	Arg	Leu	Gly	Leu
			35				40					45			
Pro	Leu	Leu	Leu	Met	Pro	Glu	Glu	Ala	Arg	Leu	Leu	Ala	Glu	Ile	Gly
			50			55					60				
Ala	Val	Thr	Leu	Val	Ser	Ala	Pro	Arg	Pro	Asp	Ser	Arg	His	His	Ser
65					70					75				80	
Leu	Ala	Leu	Thr	Ser	Phe	Lys	Arg	Gln	Gln	Glu	Glu	Ser	Phe	Gln	Glu
				85					90					95	
Gln	Ser	Ala	Leu	Ala	Ala	Glu	Ala	Arg	Glu	Thr	Arg	Arg	Gln	Glu	Leu
			100					105					110		
Leu	Glu	Lys	Ile	Thr	Glu	Gly	Gln	Ala	Ala	Lys	Lys	Gln	Lys	Leu	Glu
		115					120					125			
Gln	Ala	Ser	Gly	Ala	Ser	Ser	Ser	Gln	Glu	Ala	Gly	Ser	Ser	Gln	Ala
		130				135					140				
Ala	Lys	Glu	Asp	Glu	Thr	Ser	Asp	Gly	Gln	Ala	Ser	Gly	Glu	Gln	Glu
145					150					155				160	
Glu	Ala	Gly	Pro	Ser	Ser	Ser	Gln	Ala	Gly	Pro	Ser	Asn	Gly	Val	Ala
				165					170					175	
Pro	Leu	Pro	Arg	Ser	Ala	Leu	Leu	Val	Gln	Leu	Ala	Thr	Ala	Arg	Pro
			180					185					190		
Arg	Pro	Val	Lys	Ala	Arg	Pro	Leu	Asp	Trp	Arg	Val	Gln	Ser	Lys	Asp
		195					200					205			
Trp	Pro	His	Ala	Gly	Arg	Pro	Ala	His	Glu	Leu	Arg	Tyr	Ser	Ile	Tyr
		210				215					220				
Arg	Asp	Leu	Trp	Glu	Arg	Gly	Phe	Phe	Leu	Ser	Ala	Ala	Gly	Lys	Phe
225					230					235				240	
Gly	Gly	Asp	Phe	Leu	Val	Tyr	Pro	Gly	Asp	Pro	Leu	Arg	Phe	His	Ala
			245						250					255	
His	Tyr	Ile	Ala	Gln	Cys	Trp	Ala	Pro	Glu	Asp	Thr	Ile	Pro	Leu	Gln
			260					265					270		
Asp	Leu	Val	Ala	Ala	Gly	Arg	Leu	Gly	Thr	Ser	Val	Arg	Lys	Thr	Leu
		275					280					285			
Leu	Leu	Cys	Ser	Pro	Gln	Pro	Asp	Gly	Lys	Val	Val	Tyr	Thr	Ser	Leu
		290				295					300				
Gln	Trp	Ala	Ser	Leu	Gln										
305					310										

<210> 3079

<211> 1785

<212> DNA

<213> Homo sapiens

<400> 3079

atggacacac tctatactgg ctccagccca tctgaaccag gctccagctg ctcacccaca
60
ccccacctg tgccccgccg aggcacccac accaccgtgt cccaagtcca gccccctccc
120
tccaaggcat cagcacctga accccctgca gaagaagaag tggcaactgg tacaacctca
180
gcctctgatg acctggaagc cctgggtaca ctgagcctgg ggaccacaga ggagaaggca
240
gcagctgagg cggtctgtgcc caggaccatt ggggccgagc tgatggagct ggtgcggaga
300
aacactggcc tgagccacga attatgccgg gtggccatcg gcatcatagt gggtcacatc
360
caggcctcgg tgccggccag ctcaccagtc atggagcagg tcctcctctc actcgtagag
420
ggcaaggacc tcagcatggc cctgccctca gggcaggtct gccacgacca gcagaggctg
480
gaggtgatct ttgcagacct ggctcgccgg aaggacgacg cccagcagcg cagttgggca
540
ctatatgagg atgaggggtgt catccgctgc tacctagagg agctgctgca tattctgact
600
gatgcagacc ctgaagtttg caagaaaatg tgcaagagaa acgagttcga gtctgtcctg
660
gccttggtgg cctattacca aatggaacac cgagcatcac tgccggctgct gtcctcaag
720
tgctttggcg ccattgtcag cctggatgca gccatcatct ccacgcttgt gtcattccgtg
780
ctgcctgtag agctggcgag ggacatgcag acagacacgc aggaccacca gaaactctgt
840
tactctgccc tcatcctggc catggtcttc tccatgggag aggcagtgcc ctatgcacac
900
tatgagcacc tgggcacgcc ttctgcccag ttctactga acatcgctga ggatgggctg
960
cccttggaac ccacagagca gctgccggac ctctgcgtga acctgcttct ggctctcaac
1020
ctgcacctgc cagctgctga ccagaatgtc atcatggctg ccctgagcaa acacgccaat
1080
gtcaagatct tctccgagaa gctgttggtg ctctgaaca gaggggatga ccctgtgcgc
1140
atcttcaaac atgagccaca gccaccacac tctgtcctca agttcctgca ggacgtgttt
1200
ggcagcccg ccacagctgc catcttctac cacacagaca tgatggctct cattgacatc
1260
actgtgcggc acatcgcaga cctgtcacca ggagacaagg gaccgttcgg ggcgggccag
1320
aggccttggc caggagtcc tcgcctgtta gaaccaggat ccaccccatc gcgggagccg
1380
caccctgtgg agcgttctgg ggtcccgcc ctgacctctt cctgggcttc gggatgcccc
1440
cgtcctctgc acccggcgt gcagctcgtt atcgattccg cctttggagg ccggtccgta
1500

tagtgacttc ccggactctc tcacggttag ccggcaaccc gcggagcccc ctcccccatg
 1560
 cgatgagtcc gccgtctagg ggcggggcct cccaatgtgc caatagaaac aatgactgac
 1620
 cgattggagt gctccgcgtt caccctcgc ctccgctcct ctctgtgacgt ctgttgcgcc
 1680
 aggtccaccc attggcctgg cgagaccggc gcgtgccagg agttacgcag ggagagctgg
 1740
 aatgcaccga ggggtgggggg aggactgagt ttctgtgtca gtccc
 1785

<210> 3080

<211> 500

<212> PRT

<213> Homo sapiens

<400> 3080

Met	Asp	Thr	Leu	Tyr	Thr	Gly	Ser	Ser	Pro	Ser	Glu	Pro	Gly	Ser	Ser	1	5	10	15
Cys	Ser	Pro	Thr	Pro	Pro	Pro	Val	Pro	Arg	Arg	Gly	Thr	His	Thr	Thr	20	25	30	
Val	Ser	Gln	Val	Gln	Pro	Pro	Pro	Ser	Lys	Ala	Ser	Ala	Pro	Glu	Pro	35	40	45	
Pro	Ala	Glu	Glu	Glu	Val	Ala	Thr	Gly	Thr	Thr	Ser	Ala	Ser	Asp	Asp	50	55	60	
Leu	Glu	Ala	Leu	Gly	Thr	Leu	Ser	Leu	Gly	Thr	Thr	Glu	Glu	Lys	Ala	65	70	75	80
Ala	Ala	Glu	Ala	Ala	Val	Pro	Arg	Thr	Ile	Gly	Ala	Glu	Leu	Met	Glu	85	90	95	
Leu	Val	Arg	Arg	Asn	Thr	Gly	Leu	Ser	His	Glu	Leu	Cys	Arg	Val	Ala	100	105	110	
Ile	Gly	Ile	Ile	Val	Gly	His	Ile	Gln	Ala	Ser	Val	Pro	Ala	Ser	Ser	115	120	125	
Pro	Val	Met	Glu	Gln	Val	Leu	Leu	Ser	Leu	Val	Glu	Gly	Lys	Asp	Leu	130	135	140	
Ser	Met	Ala	Leu	Pro	Ser	Gly	Gln	Val	Cys	His	Asp	Gln	Gln	Arg	Leu	145	150	155	160
Glu	Val	Ile	Phe	Ala	Asp	Leu	Ala	Arg	Arg	Lys	Asp	Asp	Ala	Gln	Gln	165	170	175	
Arg	Ser	Trp	Ala	Leu	Tyr	Glu	Asp	Glu	Gly	Val	Ile	Arg	Cys	Tyr	Leu	180	185	190	
Glu	Glu	Leu	Leu	His	Ile	Leu	Thr	Asp	Ala	Asp	Pro	Glu	Val	Cys	Lys	195	200	205	
Lys	Met	Cys	Lys	Arg	Asn	Glu	Phe	Glu	Ser	Val	Leu	Ala	Leu	Val	Ala	210	215	220	
Tyr	Tyr	Gln	Met	Glu	His	Arg	Ala	Ser	Leu	Arg	Leu	Leu	Leu	Leu	Lys	225	230	235	240
Cys	Phe	Gly	Ala	Met	Cys	Ser	Leu	Asp	Ala	Ala	Ile	Ile	Ser	Thr	Leu	245	250	255	
Val	Ser	Ser	Val	Leu	Pro	Val	Glu	Leu	Ala	Arg	Asp	Met	Gln	Thr	Asp	260	265	270	
Thr	Gln	Asp	His	Gln	Lys	Leu	Cys	Tyr	Ser	Ala	Leu	Ile	Leu	Ala	Met	275	280	285	
Val	Phe	Ser	Met	Gly	Glu	Ala	Val	Pro	Tyr	Ala	His	Tyr	Glu	His	Leu				

290 295 300
 Gly Thr Pro Phe Ala Gln Phe Leu Leu Asn Ile Val Glu Asp Gly Leu
 305 310 315 320
 Pro Leu Asp Thr Thr Glu Gln Leu Pro Asp Leu Cys Val Asn Leu Leu
 325 330 335
 Leu Ala Leu Asn Leu His Leu Pro Ala Ala Asp Gln Asn Val Ile Met
 340 345 350
 Ala Ala Leu Ser Lys His Ala Asn Val Lys Ile Phe Ser Glu Lys Leu
 355 360 365
 Leu Leu Leu Leu Asn Arg Gly Asp Asp Pro Val Arg Ile Phe Lys His
 370 375 380
 Glu Pro Gln Pro Pro His Ser Val Leu Lys Phe Leu Gln Asp Val Phe
 385 390 395 400
 Gly Ser Pro Ala Thr Ala Ala Ile Phe Tyr His Thr Asp Met Met Ala
 405 410 415
 Leu Ile Asp Ile Thr Val Arg His Ile Ala Asp Leu Ser Pro Gly Asp
 420 425 430
 Lys Gly Pro Phe Gly Ala Gly Gln Arg Pro Trp Pro Gly Val Pro Arg
 435 440 445
 Leu Leu Glu Pro Gly Ser Thr Pro Ser Arg Glu Pro His Pro Val Glu
 450 455 460
 Arg Ser Gly Val Pro Ala Leu Thr Ser Ser Trp Ala Ser Gly Cys Pro
 465 470 475 480
 Arg Pro Leu His Pro Ala Leu Gln Leu Val Ile Asp Ser Ala Phe Gly
 485 490 495
 Gly Arg Ser Val
 500

<210> 3081

<211> 1902

<212> DNA

<213> Homo sapiens

<400> 3081

nntcatgagc agatggacga acttggccgc gtcgtcgtgg cagttctgga ggatttttct
 60
 ccacatggcg acgaacttgt ggacggacac ggagcccgtg cgctcccccc ggccacgagc
 120
 caaagcattc cgaccttcta cttccccaga ggacgcccgc aggactccgt caacgtggat
 180
 gccgtcatca gcaagatcga gagcaccttc gcccggttcc cccacgagag ggccaccatg
 240
 gatgacatgg gcttggtggc caaggcctgc ggctgcccc tctactggaa ggggcccgtc
 300
 ttctatggcg ccggcgggga gcgcacgggc tccgtgtccg tccacaagtt cgtcgccatg
 360
 tggagaaaaa tcctccagaa ctgccacgac gacgcggcca agttcgtcca tctgctcatg
 420
 agccccggct gcaactacct ggtgcaggag gactttgtcc ccttcttgca ggacgtggtg
 480
 aacacgcacc cggggctgtc gttcctgaag gaggcgtccg agttccaact gcgctacatc
 540
 accacggtca tccagcggat cttctacgcc gtgaaccggt cctgggtccg caggatcacc
 600

tgcgccgagc tgcggaggag ctcttctctg cagaatgtgg cgctgctgga ggaggaggcg
 660
 gacatcaacc agctgaccga attcttctctg tacgagcatt tctacgtcat ctactgcaag
 720
 ttctgggagc tggacacgga ccacgacctg ctcatcgacg cggacgacct ggcgcggcac
 780
 aatgaccacg ccctttctac caagatgata gacaggatct tctcaggagc agtcacacga
 840
 ggcagaaaag tgcagaagga agggaagatc agctatgccg actttgtctg gtttttgatc
 900
 tctgaggaag acaaaaaaac accgaccagc atcgagtact ggttccgctg catggacctg
 960
 gacggggacg gcgccctgtc catgttcgag ctcgagtact tctacgagga gcagtgccga
 1020
 aggtctggaca gcatggccat cgaggccctg cccttccagg actgcctctg ccagatgctg
 1080
 gacctggtca agccgaggac tgaagggaag atcacgctgc aggacctgaa gcgctgcaag
 1140
 ctggccaacg tcttcttcga caccttcttc aacatcgaga agtacctcga ccacgagcag
 1200
 aaagagcaga tctccctgct cagggacggt gacagcggcg gccccgagct ctcggactgg
 1260
 gagaagtacg cggccgagga gtacgacatc ctggtggccg aggagaccgt gggagagccc
 1320
 tgggaggacg ggttcgagge cgagctcagc cccgtggagc agaagctgag tgcgctgcgc
 1380
 tccccgctgg cccagaggcc cttcttcgag gcgccctcac cgctggggcg cgtggacctg
 1440
 tacgagtacg catgcgggga cgaggacctg gagccgctgt gacgccaccc gcgagaacgc
 1500
 cgccgcgggg cgcggcccca cgtgccacca cggggccacc gcggctcgtg taaaaactgt
 1560
 tgtggaaaat gagtgcgttt gtacggaatg ataaactttt atttattcac agaagcgtgt
 1620
 tgattgccac tgtgggttcg tggctggacc tgcccagagc cctgtgcccg ggggacacgt
 1680
 agggccgcgc gtgaatggga cgggttccca cacggacacc ctccagcact tgccgttccc
 1740
 gaccggcctt gggttccggg gcctgcgtct gtggaaaggg tccatgtgcg cacaacggtg
 1800
 accggcggct cccgggcgcc tcagtcctgg acaggagcct ccaccacagg ctgtgtgaat
 1860
 gttttgtgta aacgtacaaa accgtttctg gcgatcacga aa
 1902

<210> 3082

<211> 414

<212> PRT

<213> Homo sapiens

<400> 3082

Met Asp Asp Met Gly Leu Val Ala Lys Ala Cys Gly Cys Pro Leu Tyr
 1 5 10 15
 Trp Lys Gly Pro Leu Phe Tyr Gly Ala Gly Gly Glu Arg Thr Gly Ser

```

      20      25      30
Val Ser Val His Lys Phe Val Ala Met Trp Arg Lys Ile Leu Gln Asn
      35      40      45
Cys His Asp Asp Ala Ala Lys Phe Val His Leu Leu Met Ser Pro Gly
      50      55      60
Cys Asn Tyr Leu Val Gln Glu Asp Phe Val Pro Phe Leu Gln Asp Val
      65      70      75      80
Val Asn Thr His Pro Gly Leu Ser Phe Leu Lys Glu Ala Ser Glu Phe
      85      90      95
His Ser Arg Tyr Ile Thr Thr Val Ile Gln Arg Ile Phe Tyr Ala Val
      100      105      110
Asn Arg Ser Trp Ser Gly Arg Ile Thr Cys Ala Glu Leu Arg Arg Ser
      115      120      125
Ser Phe Leu Gln Asn Val Ala Leu Leu Glu Glu Glu Ala Asp Ile Asn
      130      135      140
Gln Leu Thr Glu Phe Phe Ser Tyr Glu His Phe Tyr Val Ile Tyr Cys
      145      150      155      160
Lys Phe Trp Glu Leu Asp Thr Asp His Asp Leu Leu Ile Asp Ala Asp
      165      170      175
Asp Leu Ala Arg His Asn Asp His Ala Leu Ser Thr Lys Met Ile Asp
      180      185      190
Arg Ile Phe Ser Gly Ala Val Thr Arg Gly Arg Lys Val Gln Lys Glu
      195      200      205
Gly Lys Ile Ser Tyr Ala Asp Phe Val Trp Phe Leu Ile Ser Glu Glu
      210      215      220
Asp Lys Lys Thr Pro Thr Ser Ile Glu Tyr Trp Phe Arg Cys Met Asp
      225      230      235      240
Leu Asp Gly Asp Gly Ala Leu Ser Met Phe Glu Leu Glu Tyr Phe Tyr
      245      250      255
Glu Glu Gln Cys Arg Arg Leu Asp Ser Met Ala Ile Glu Ala Leu Pro
      260      265      270
Phe Gln Asp Cys Leu Cys Gln Met Leu Asp Leu Val Lys Pro Arg Thr
      275      280      285
Glu Gly Lys Ile Thr Leu Gln Asp Leu Lys Arg Cys Lys Leu Ala Asn
      290      295      300
Val Phe Phe Asp Thr Phe Phe Asn Ile Glu Lys Tyr Leu Asp His Glu
      305      310      315      320
Gln Lys Glu Gln Ile Ser Leu Leu Arg Asp Gly Asp Ser Gly Gly Pro
      325      330      335
Glu Leu Ser Asp Trp Glu Lys Tyr Ala Ala Glu Glu Tyr Asp Ile Leu
      340      345      350
Val Ala Glu Glu Thr Val Gly Glu Pro Trp Glu Asp Gly Phe Glu Ala
      355      360      365
Glu Leu Ser Pro Val Glu Gln Lys Leu Ser Ala Leu Arg Ser Pro Leu
      370      375      380
Ala Gln Arg Pro Phe Phe Glu Ala Pro Ser Pro Leu Gly Ala Val Asp
      385      390      395      400
Leu Tyr Glu Tyr Ala Cys Gly Asp Glu Asp Leu Glu Pro Leu
      405      410

```

<210> 3083

<211> 610

<212> DNA

<213> Homo sapiens

<400> 3083

ngccggccca gctgctggga acctgtcagg ccctcgggct ccagtcacct gagctggcac
60
agggggccac cctgtgaggt gtacattgcc gtcctgcaga gatccaggct gcacgcggcg
120
gactggggcag gccgggcccc ggcactgggtg ggtgacagtc atacttcgtg gagcccagcg
180
agcatccccg gcaagcacta ccaggctgtg ggtctgcacc tctggaaggt agagaagcgg
240
cgggtcaatc tgcctagggg cctgtccatg cccccctgg ctggcacgcg gtgccatgca
300
tacgaccggg aggtccacct gcgttgtgag ctctcaccgg gctactacct ggctgtcccc
360
agcaccttcc tgaaggacgc gccaggggag ttcctgctcc gagtcttctc taccgggcga
420
gtctccctta ggtgagagga accgcgcagt gctgctggct ctccgaggcc acagggccctt
480
ccaaggcagg atttgggcac tttccctctg tggttggcag gtgtccatgt ggggaactgag
540
gccaccggga acctgtgcc agcgcctctc catgtttgtc ttcttggcag cgccatcagg
600
gcagtggcca
610

<210> 3084

<211> 144

<212> PRT

<213> Homo sapiens

<400> 3084

Xaa	Arg	Pro	Ser	Cys	Trp	Glu	Pro	Val	Arg	Pro	Ser	Gly	Ser	Ser	His
1				5					10					15	
Leu	Ser	Trp	His	Arg	Gly	Pro	Pro	Cys	Glu	Val	Tyr	Ile	Ala	Val	Leu
			20					25					30		
Gln	Arg	Ser	Arg	Leu	His	Ala	Ala	Asp	Trp	Ala	Gly	Arg	Ala	Arg	Ala
			35				40					45			
Leu	Val	Gly	Asp	Ser	His	Thr	Ser	Trp	Ser	Pro	Ala	Ser	Ile	Pro	Gly
			50			55					60				
Lys	His	Tyr	Gln	Ala	Val	Gly	Leu	His	Leu	Trp	Lys	Val	Glu	Lys	Arg
65					70					75				80	
Arg	Val	Asn	Leu	Pro	Arg	Val	Leu	Ser	Met	Pro	Pro	Val	Ala	Gly	Thr
				85					90					95	
Ala	Cys	His	Ala	Tyr	Asp	Arg	Glu	Val	His	Leu	Arg	Cys	Glu	Leu	Ser
			100					105					110		
Pro	Gly	Tyr	Tyr	Leu	Ala	Val	Pro	Ser	Thr	Phe	Leu	Lys	Asp	Ala	Pro
			115				120						125		
Gly	Glu	Phe	Leu	Leu	Arg	Val	Phe	Ser	Thr	Gly	Arg	Val	Ser	Leu	Arg
			130			135						140			

<210> 3085

<211> 1080

<212> DNA

<213> Homo sapiens

<400> 3085
 nntgtgcgga ggaggagttc catcattacg gtcttgcatt agataaatat cccacttta
 60
 cttctccaat aagaagatat tcagatattg tagtaccctg cttgttaatg gcagccattt
 120
 caaaagataa gaaaatggaa attaaggga atctgttcag caacaagat cttgaggaat
 180
 tatgcagaca tatcaacaac agaaaccaag cagcacagca ttctcagaag cagtctactg
 240
 agctcttcca gtgcatgtac ttcaaagaca aagaccctgc caccgaggag cgttgcatat
 300
 ctgacggagt tatttattca attagaacaa atgggtgtgct tctatttata ccaaggtttg
 360
 ggattaaagg tgctgcttat ctaaaaaata aagatgggtt agtcatctca tgtggcccag
 420
 atagctgttc tgaatggaaa ccaggatccc ttcaacgatt tcaaaacaaa attacctcta
 480
 ctacaacaga tggggaatct gttacgttcc atttgtttga ccatgtaacc gtaagaatat
 540
 ccatacaggc ctcacgttgc cattctgata caatcagact tgaaataatt agtaacaaac
 600
 catacaagat accaaatata gaacttattc atcagagttc ccccttgctg aagagtgagt
 660
 tagtgaaaga agtaactaaa tctgtggaag aagctcagct tgccaagaa gtcaaagtaa
 720
 acatcattca ggaggaatat caagaatatc gccaaacaaa gggaaggagc ctatacacac
 780
 ttctagagga gatacgggac ctagctctcc tggatgtttc aaacaattat ggaatatgag
 840
 aggctcttac ttcactaaga gctgtcatat gtgaatgttt tacagtcttt tcaaacttaa
 900
 catttaatgt gtgtcactca gtgctctagt cgatcaggac tgggtagcta tttcgcatat
 960
 atgtanaatg ttctcagccg ggcacggtgg ctacgcctg taacccagc actttgggag
 1020
 gctgaggcgg gcggatcacg aggtcaggag attgagacca tcttggttaa cacggtgaaa
 1080

<210> 3086
 <211> 58
 <212> PRT
 <213> Homo sapiens

<400> 3086
 Met Cys Val Thr Gln Cys Ser Ser Arg Ser Gly Leu Gly Ser Tyr Phe
 1 5 10 15
 Ala Tyr Met Xaa Asn Val Leu Ser Arg Ala Arg Trp Leu Thr Pro Val
 20 25 30
 Thr Pro Ala Leu Trp Glu Ala Glu Ala Gly Gly Ser Arg Gly Gln Glu
 35 40 45
 Ile Glu Thr Ile Leu Ala Asn Thr Val Lys
 50 55

<210> 3087
<211> 2329
<212> DNA
<213> Homo sapiens

<400> 3087
naggagaagc atctggacga tgaggaaaga aggaagcgaa aggaagagaa gaagcggaaag
60
cgagagaggg agcactgtga cacggagggga gaggctgacg actttgatcc tgggaagaag
120
gtggaggtgg agccgcccc agatcggcca gtccgagcgt gccggacaca gcagccggaa
180
atggagcgca cccatattca gcaactcctg gaacacttcc tccgccagct tcagagaaaa
240
gatcccatg gattttttgc ttttcctgtc acggatgcaa ttgctcctgg atattcaatg
300
ataataaaac atcccatgga ttttggcacc atgaaagaca aaattgtagc taatgaatac
360
aagtcagtta cgggaatttaa ggcagatttc aagctgatgt gtgataatgc aatgacatac
420
aataggccag ataccgtgta ctacaagttg gcgaagaaga tccttcacgc aggctttaag
480
atgatgagca aacaggcagc tcttttgggc aatgaagata cagctgttga ggaacctgtc
540
cctgaagttg taccagtaca agtagaaact gccaaagaaat ccaaaaagcc gagtagagaa
600
gttatcagct gcatgtttga gcctgaaggg aatgcctgca gcttgacgga cagtaccgca
660
gaggagcacg tgctggcgct ggtggagcac gcagctgacg aagctcggga caggatcaac
720
cggttcctcc caggcggcaa gatgggctat ctgaagagga acggggacgg gagcctgctc
780
tacagcgtgg tcaacacggc cgagccgaac gctgatgagg aggagacca cccggtgact
840
tgagctcgct ctccagtaag ctactcccag gcttcaccac gctgggcttc aaagacgaga
900
gaagaaacaa agtcaccttt ctctccagtg ccactactgc gctttcgatg cagaataatt
960
cagtatttgg cgacttgaag tcggacgaga tggagctgct ctactcagcc tacggagatg
1020
agacaggcgt gcagtgtgcg ctgagcctgc aggagtttgt gaaggatgct gggagctaca
1080
gcaagaaagt ggtggacgac ctcttgacc agatcacagg cggagaccac tctaggacgc
1140
tcttcagct gaagcagaga agaaatgttc ccatgaagcc tccagatgaa gccaaagttg
1200
gggacacctt aggagacagc agcagctctg ttctggagtt catgtcgatg aagtcctatc
1260
ccgacgtttc tgtggatata tccatgctca gctctctggg gaaggtgaag aaggagctgg
1320
accctgacga cagccatttg aacttggatg agacgacgaa gctcctgcag gacctgcacg
1380
aagcacaggc ggagcgcggc ggctctcggc cgtcgtccaa cctcagctcc ctgtccaacg
1440

cctccgagag ggaccagcac cacctgggaa gcccttctcg cctgagtgtc ggggagcagc
 1500
 cagacgtcac ccacgacccc tatgagtttc ttcagtctcc agagcctgcg gcctctgcc
 1560
 agacctaaact ctagaccacc ttcagctctt ttattttatt tttttagttt tattttgcac
 1620
 gtgtagagtt tttgtcatca gacaaggact ttgatcctgt cccctttggc atgcgggaag
 1680
 cagccgcggg gaggtaatga attgtctgtg gtatcatgtc agcagagtct ccaagcccca
 1740
 cgaaccctga ggagtggagt catacgcgaa ggccatatgg ccatcgtgtc agcagagaga
 1800
 gtctctgtac acagccccgt gaaccctgag gagtggagtc atacacgaag ggcgtgtggc
 1860
 catcgtgtca gcagagagag tctctgtaca cagccccgtg aaccctgagg agtggagtca
 1920
 tacgcgaagg gtgtgtggcc aggctgcaga gctgcgtgcc gtttgtgtcc gagcatcacg
 1980
 tgtggctcca gcccttgttt ctgccagtgt agacacctct gtctgccccca ctgtcctggg
 2040
 gtcgctcttg ggaggcacag gcatgggtgt gtctggcctc attctgtatc agtccagtgt
 2100
 gttcctgtca tagtttgtgt ctcccaggca ggccatggta ggggcctcgc aggggccatt
 2160
 ggggagcaca gggccaggct ggggtgagga gagctcccct gttttctgtt taattgatga
 2220
 gcctgggaaa ggagtgtgtt ctgcctgccc gttacagtgg agcgttccgt gtccataaaa
 2280
 cgtttttctaa ctgggaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 2329

<210> 3088

<211> 280

<212> PRT

<213> Homo sapiens

<400> 3088

Xaa	Glu	Lys	His	Leu	Asp	Asp	Glu	Glu	Arg	Arg	Lys	Arg	Lys	Glu	Glu
1				5					10					15	
Lys	Lys	Arg	Lys	Arg	Glu	Arg	Glu	His	Cys	Asp	Thr	Glu	Gly	Glu	Ala
			20					25					30		
Asp	Asp	Phe	Asp	Pro	Gly	Lys	Lys	Val	Glu	Val	Glu	Pro	Pro	Pro	Asp
		35				40					45				
Arg	Pro	Val	Arg	Ala	Cys	Arg	Thr	Gln	Gln	Pro	Glu	Met	Glu	Arg	Thr
		50				55					60				
His	Ile	Gln	Gln	Leu	Leu	Glu	His	Phe	Leu	Arg	Gln	Leu	Gln	Arg	Lys
65				70					75					80	
Asp	Pro	His	Gly	Phe	Phe	Ala	Phe	Pro	Val	Thr	Asp	Ala	Ile	Ala	Pro
			85					90					95		
Gly	Tyr	Ser	Met	Ile	Ile	Lys	His	Pro	Met	Asp	Phe	Gly	Thr	Met	Lys
			100					105					110		
Asp	Lys	Ile	Val	Ala	Asn	Glu	Tyr	Lys	Ser	Val	Thr	Glu	Phe	Lys	Ala
			115				120					125			
Asp	Phe	Lys	Leu	Met	Cys	Asp	Asn	Ala	Met	Thr	Tyr	Asn	Arg	Pro	Asp

130		135		140
Thr Val Tyr Tyr Lys	Leu Ala Lys Lys Ile Leu	His Ala Gly Phe Lys		
145	150	155	160	
Met Met Ser Lys Gln	Ala Ala Leu Leu Gly Asn	Glu Asp Thr Ala Val		
	165	170	175	
Glu Glu Pro Val Pro	Glu Val Val Pro Val Gln	Val Glu Thr Ala Lys		
	180	185	190	
Lys Ser Lys Lys Pro	Ser Arg Glu Val Ile Ser	Cys Met Phe Glu Pro		
	195	200	205	
Glu Gly Asn Ala Cys	Ser Leu Thr Asp Ser Thr	Ala Glu Glu His Val		
	210	215	220	
Leu Ala Leu Val Glu	His Ala Ala Asp Glu	Ala Arg Asp Arg Ile Asn		
225	230	235	240	
Arg Phe Leu Pro Gly	Gly Lys Met Gly Tyr Leu	Lys Arg Asn Gly Asp		
	245	250	255	
Gly Ser Leu Leu Tyr	Ser Val Val Asn Thr Ala	Glu Pro Asn Ala Asp		
	260	265	270	
Glu Glu Glu Thr His	Pro Val Thr			
	275	280		

<210> 3089

<211> 722

<212> DNA

<213> Homo sapiens

<400> 3089

```

ncagctttgg accaagcgac catgagaggg ccagagctcg ggcccgaac cagcatggag
60
ggagacgtgc tggacacact ggaggcgctg ggggtataaag gaccattggt agaagagcaa
120
gcccttacaa aggcggcaga ggggtggatta tcttcacctg aattttcaga gctctgtatt
180
tggttaggct ctcaaataaa atcattatgc aacttgaag aaagtatcac gtctgctggg
240
agagatgacc tagagagctt ccagcttgag ataagtgggt ttttaaaaga gatggcctgt
300
ccatactcgg tactcgtctc aggagacatt aaagagcgcc tcacaaagaa ggatgactgc
360
ttgaaacttc tgttggtttt aagtacagaa cttcaagctt tacaaatatt acagaacaag
420
aaacataaaa atttctcaatt agataaaaat agtgaagttt atcaggaagt tcaagctatg
480
tttgatacac ttggtatacc caagtcaaca acttctgaca ttccgcatat gctaaaccaa
540
gtggaatcaa aggtgaaaga tattctctca aaggtccaga aaaatcatgt gggaaaacca
600
ctactgaaaa tggattttaa ttcagaacag gcggaacaac tggaaagaat caatgatgct
660
ctttcctgtg aatatgagtg ccgcccacga atgttaatga aacgattaga tgtgactgta
720
ca
722

```

<210> 3090

<211> 240
 <212> PRT
 <213> Homo sapiens

<400> 3090
 Xaa Ala Leu Asp Gln Ala Thr Met Arg Gly Pro Glu Leu Gly Pro Glu
 1 5 10 15
 Thr Ser Met Glu Gly Asp Val Leu Asp Thr Leu Glu Ala Leu Gly Tyr
 20 25 30
 Lys Gly Pro Leu Leu Glu Glu Gln Ala Leu Thr Lys Ala Ala Glu Gly
 35 40 45
 Gly Leu Ser Ser Pro Glu Phe Ser Glu Leu Cys Ile Trp Leu Gly Ser
 50 55 60
 Gln Ile Lys Ser Leu Cys Asn Leu Glu Glu Ser Ile Thr Ser Ala Gly
 65 70 75 80
 Arg Asp Asp Leu Glu Ser Phe Gln Leu Glu Ile Ser Gly Phe Leu Lys
 85 90 95
 Glu Met Ala Cys Pro Tyr Ser Val Leu Val Ser Gly Asp Ile Lys Glu
 100 105 110
 Arg Leu Thr Lys Lys Asp Asp Cys Leu Lys Leu Leu Phe Leu Ser
 115 120 125
 Thr Glu Leu Gln Ala Leu Gln Ile Leu Gln Asn Lys Lys His Lys Asn
 130 135 140
 Ser Gln Leu Asp Lys Asn Ser Glu Val Tyr Gln Glu Val Gln Ala Met
 145 150 155 160
 Phe Asp Thr Leu Gly Ile Pro Lys Ser Thr Thr Ser Asp Ile Pro His
 165 170 175
 Met Leu Asn Gln Val Glu Ser Lys Val Lys Asp Ile Leu Ser Lys Val
 180 185 190
 Gln Lys Asn His Val Gly Lys Pro Leu Leu Lys Met Asp Leu Asn Ser
 195 200 205
 Glu Gln Ala Glu Gln Leu Glu Arg Ile Asn Asp Ala Leu Ser Cys Glu
 210 215 220
 Tyr Glu Cys Arg Arg Arg Met Leu Met Lys Arg Leu Asp Val Thr Val
 225 230 235 240

<210> 3091
 <211> 333
 <212> DNA
 <213> Homo sapiens

<400> 3091
 acgcgtgaag ggggaggagg ggaaggaagc cctggggagc agctgctcac ccctttgccca
 60
 caccatcttg gcctggcagg ggtctgggac tgacagggag caccagcaggc ccttggtacc
 120
 cccagggcga ccccttctgc caagtgtccc aaaatgattg ctaaatgcct ggctccccca
 180
 ctctttgact ccattctcttg gttccctctt tctgctgccca gctcccccca ctcttccttg
 240
 gggactcctt tttgtgtccc ccttctcccc tgcccctact gccaggcaga tccccttttc
 300
 ttccataccc atccctgcct ccctgctcgg ccg
 333

<210> 3092
 <211> 104
 <212> PRT
 <213> Homo sapiens

<400> 3092
 Met Gly Met Glu Glu Lys Gly Ile Cys Leu Ala Val Gly Ala Gly Glu
 1 5 10 15
 Lys Gly Asp Thr Lys Arg Ser Pro Gln Gly Arg Val Gly Gly Ala Gly
 20 25 30
 Ser Arg Lys Arg Glu Pro Arg Asp Gly Val Lys Glu Trp Gly Ser Gln
 35 40 45
 Ala Phe Ser Asn His Phe Gly Thr Leu Gly Arg Arg Gly Arg Pro Gly
 50 55 60
 Gly Thr Lys Gly Leu Gly Cys Ser Leu Ser Val Pro Asp Pro Cys Gln
 65 70 75 80
 Ala Lys Met Val Trp Gln Arg Gly Glu Gln Leu Leu Pro Arg Ala Ser
 85 90 95
 Phe Pro Ser Ala Pro Phe Thr Arg
 100

<210> 3093
 <211> 720
 <212> DNA
 <213> Homo sapiens

<400> 3093
 nnaccggttt gtccaaggag gctggcctga ccacttacag cctgtccctg gctctggtgt
 60
 gaggagcatt aggccagct cagggtcctc tggcttcaga gccagctggc gtgggcatcc
 120
 agggggcagc ctgtgggcag tgactctgtc tgtctttgga caggacaagg actgccatcc
 180
 accatggtga agctgggctg cagcttctct gggaagccag gtaaagaccc tggggaccag
 240
 gatggggctg ccatggacag tgtgcctctg atcagcccct tggacatcag ccagctccag
 300
 ccgccactcc ctgaccaggt ggtcatcaag acacagacag aataccagct gtcctcccca
 360
 gaccagcaga atttcctga cctggagggc cagaggctga actgcagcca cccagaggaa
 420
 gggcgagggc tgcccaccgc acggatgatc gccttcgcca tggcgctact gggctgcgtg
 480
 ctgatcatgt acaaggccat ctggtacgac cagttcacct gccccgacgg cttctgctg
 540
 cggcacaaga tctgcacgcc gctgaccctg gagatgtact acacggagat ggaccccgag
 600
 cgccaccgca gcacccctggc ggccatcggg gcctaccgac tgagccgcaa gcacggcacg
 660
 gagacgccgg cggcctgggg ggacggctac cgcgcagcca aggaggagcg caaggggccc
 720

<210> 3094

<211> 179
 <212> PRT
 <213> Homo sapiens

<400> 3094
 Met Val Lys Leu Gly Cys Ser Phe Ser Gly Lys Pro Gly Lys Asp Pro
 1 5 10 15
 Gly Asp Gln Asp Gly Ala Ala Met Asp Ser Val Pro Leu Ile Ser Pro
 20 25 30
 Leu Asp Ile Ser Gln Leu Gln Pro Pro Leu Pro Asp Gln Val Val Ile
 35 40 45
 Lys Thr Gln Thr Glu Tyr Gln Leu Ser Ser Pro Asp Gln Gln Asn Phe
 50 55 60
 Pro Asp Leu Glu Gly Gln Arg Leu Asn Cys Ser His Pro Glu Glu Gly
 65 70 75 80
 Arg Arg Leu Pro Thr Ala Arg Met Ile Ala Phe Ala Met Ala Leu Leu
 85 90 95
 Gly Cys Val Leu Ile Met Tyr Lys Ala Ile Trp Tyr Asp Gln Phe Thr
 100 105 110
 Cys Pro Asp Gly Phe Leu Leu Arg His Lys Ile Cys Thr Pro Leu Thr
 115 120 125
 Leu Glu Met Tyr Tyr Thr Glu Met Asp Pro Glu Arg His Arg Ser Ile
 130 135 140
 Leu Ala Ala Ile Gly Ala Tyr Pro Leu Ser Arg Lys His Gly Thr Glu
 145 150 155 160
 Thr Pro Ala Ala Trp Gly Asp Gly Tyr Arg Ala Ala Lys Glu Glu Arg
 165 170 175
 Lys Gly Pro

<210> 3095
 <211> 519
 <212> DNA
 <213> Homo sapiens

<400> 3095
 ggtgggattt caccggcaca ttcatgtacc catagcgggtg ctcattgcac acgtggacgg
 60
 agaccccgagc agcaggcctc agctcatgtg actcggccct ctaagaggcc cagcaagata
 120
 gggtttgacg aggtctttgt catcagcctg gctcgcaggc ctgaccgtcg ggaacgcatg
 180
 ctgcctcgcc tctgggagat ggagatctct gggaggggtg tggatgctgt ggatggctgg
 240
 atgctcaaca gcagtgccat caggaacctc ggcgtagacc tgctcccggg ctaccaggac
 300
 ccttactcgg gccgcactct gaccaagggc gaggtgggct gcttcctcag ccattactcc
 360
 atctgggaag agcgagcagt acaaggcaca cttctggcca cgggacctgg tggccttctc
 420
 cgccagccc ctgctcgctg cccctaccca ctatgccggg gacgccgagt ggctcagtga
 480
 cacggagaca tcctctccat gggatgatgc cagcggccg
 519

<210> 3096
 <211> 159
 <212> PRT
 <213> Homo sapiens

<400> 3096
 Gly Gly Ile Ser Pro Ala His Ser Cys Thr His Ser Gly Ala His Cys
 1 5 10 15
 Thr Arg Gly Arg Arg Pro Gln Gln Gln Ala Ser Ala His Val Thr Arg
 20 25 30
 Pro Ser Lys Arg Pro Ser Lys Ile Gly Phe Asp Glu Val Phe Val Ile
 35 40 45
 Ser Leu Ala Arg Arg Pro Asp Arg Arg Glu Arg Met Leu Ala Ser Leu
 50 55 60
 Trp Glu Met Glu Ile Ser Gly Arg Val Val Asp Ala Val Asp Gly Trp
 65 70 75 80
 Met Leu Asn Ser Ser Ala Ile Arg Asn Leu Gly Val Asp Leu Leu Pro
 85 90 95
 Gly Tyr Gln Asp Pro Tyr Ser Gly Arg Thr Leu Thr Lys Gly Glu Val
 100 105 110
 Gly Cys Phe Leu Ser His Tyr Ser Ile Trp Glu Glu Arg Ala Val Gln
 115 120 125
 Gly Thr Leu Leu Ala Thr Gly Pro Gly Gly Leu Leu Arg Pro Ala Pro
 130 135 140
 Ala Arg Cys Pro Tyr Pro Leu Cys Arg Gly Arg Arg Val Ala Gln
 145 150 155

<210> 3097
 <211> 4953
 <212> DNA
 <213> Homo sapiens

<400> 3097
 aggcattccag gatgcggtgc ggggcggccc ggtgcccccc cgccccgtca cggcagccgc
 60
 ggcggccgag gggaccgggc cagggccggg ggcggcggcc cgagccgcgg tagcggcggc
 120
 ggcgggaggg gcggcctgag ggcggacggg cgggcgcccc ggttgcgggg gctcggtgcc
 180
 gctccgcact gcccggccgg tctcggcccc ggcgccatga gtggcggcgg cggcggaggg
 240
 ggctcggcgc ccagtcgctt cgccgactac tttgtcatct gcggactgga cacggagacc
 300
 gggctggagc cggacgagct gtcggcatta tgccagtaca tacaggcttc taaagccagg
 360
 gatggtgccca gccctttcat ttcaagtacg actgaaggag aaaattttga gcagacacca
 420
 ttgagaagaa cattcaaata taaggtcctt gcacgatata ctgagaacgt agaatggaat
 480
 ccctttgacc aagatgcagt aggaatgcta tgtatgccga aagggtggc attcaagacc
 540
 caggctgatc ccaggagacc ccaattccat gcctttatta tcacaaggga ggatggctct
 600

cggacatttg ggtttgccct cacattttat gaagaggtga ctagcaagca gatctgcagt
660
gcaatgcaga ccctctacca catgcacaat gctgagtatg atgtcctaca tgctccccct
720
gctgatgaca gagaccagag cagcatggag gatggtgaag acactcctgt gaccaaactg
780
cagcgcttca actcctatga cattagccgg gacactctct acgtctctaa gtgcatctgc
840
ctcatcacac ccatgtcttt catgaaggca tgtcggagcg tgccgggcca actccaccag
900
gcagtcactt cacctcagcc ccctccactg ccccttgaga gctacatata caacgtactc
960
tacgaggtgc cgctcccacc tcctggccgg tccttgaagt tttctggggc ctattggcca
1020
ataatctgcc agagaccaag taccaatgag cttccccat ttgactttcc tgtcaaagag
1080
gtttttgaac tgctcggggg ggagaatgtg tttcagcttt ttacttgtgc ccttctggag
1140
tttcaaatcc tgctctactc acagcattac cagagactga tgactgtggc ggagacgatt
1200
acagctctca tgtttccttt ccagtggcag catgtctatg tcctattct cccagcttct
1260
ctcctgcatt tcttagatgc tcctgttcca tacctgatgg gtttgcatc caatggcctg
1320
gatgaccggt caaagctgga gctgcctcaa gaggctaacc tctgctttgt ggacattgac
1380
aaccacttca ttgagttgcc agaggacttg ccacagttcc ccaacaaatt ggagtttgtc
1440
caggaagtct ctgagattct catggcattt ggaattcccc ctgaagggaa tcttcattgc
1500
agtgaagatg cctccaagct gaagaggctg cgggcctctg agcttgtctc ggacaagagg
1560
aatgggaaca ttgctggctc ccctttgcat tcctacgagc ttcttaagga gaatgaaact
1620
attgcccggc tgcaagcctt ggtcaagaga actggggtga gcctggaaaa gttggaagtg
1680
cgtgaagacc ccagcagcaa taaggatctc aaagttcagt gtgatgaaga agaactcagg
1740
atttaccagc taaacattca gatccgggaa gtttttgcaa atcgtttcac tcagatgttt
1800
gcagattatg aggtgtttgt catccaaccc agccaggata aggaatcctg gtttaccac
1860
agggagcaaa tgcaaaactt tgataaagca tcttttctgt cagatcagcc tgagccctac
1920
ctgcccttcc tctcaagatt cctggagacc cagatgtttg catttttcat tgacaacaaa
1980
ataatgtgtc atgatgatga tgataaagac cctgtactcc gggatatttg ttcccagatt
2040
gacaagatca ggctgttgaa tgttcggaca cctactctcc gtacatccat gtaccagaag
2100
tgtaccactg tggatgaagc agagaaagca attgagctgc gtctggcaaa aattgacat
2160
actgcaattc acccacattt acttgacatg aagattggac aagggaata tgagccgggg
2220

ttcttcctta agctgcagtc tgatgtactt tgcactgggc cagccagcaa caagtggaca
2280
aaaaggaatg cccctgcaca gtggaggcgg aaagaccggc agaagcagca cacagaacac
2340
ttgcgcttag acaatgacca gagagagaag tacatccagg aagccaggac tatgggcagc
2400
actatccgcc agcccaaact gtccaacctc tctccatcag tgattgceca gaccaattgg
2460
aagtttgtag agggcctgct gaaggaatgc cgcaataaga ccaagaggat gctggtggaa
2520
aagatgggcc gagaagctgt ggagctaggg catggggagg tgaacatcac aggggtggaa
2580
gagaacaccc tgattgccag cctttgtgat ctcttgaaa ggatctggag tcatggacta
2640
caagtgaac aggggaaatc agccttatgg tcccacctgt tacattatca ggacaaccgg
2700
cagagaaaac tcacatcagg aagcctcagt acctcaggaa tacttcttga ttcagaacgt
2760
aggaagtctg atgccagctc actcatgcct ccctgagga tctccctgat tcaggatatg
2820
aggcacatcc agaacatcgg ggaaatcaag actgatgtgg gaaaggccag agcatgggtg
2880
cgactgtcca tggaaaaaaaa gttactttcc agacacctga agcagctcct ctacagaccat
2940
gagctcacca aaaagttata taagcgctat gccttcctgc gctgtgatga cgagaaggag
3000
cagttcctct atcacctcct gtctttcaat gccgtcgatt acttttgctt caccaatgtc
3060
ttcacaacta tcctgatccc gtaccacatt ctgatcgta caagcaagaa gctggggggc
3120
tccatgttca ctgccaaccc atggatctgt atatcaggag aattgggtga gacacagatc
3180
atgcagattc ccaggaatgt gctagagatg accttcgagt gccagaactt ggggaagctt
3240
actactgtcc agattggcca tgataactct gggctgtatg ccaaattggct ggtggagtat
3300
gtgatggtca ggaatgagat cacaggacat acctacaagt tcccgtgtgg ccggtggtta
3360
gggaagggca tggatgatgg aagcctggag cggatcctag ttggggagct gctcacatcc
3420
cagcctgagg tggatgagag gccatgccgg accccgccgc tgcagcagtc cccagtgctc
3480
atccggaggc ttgttaccat ctaccccaac aacaagccca agctgaacac tgggcagatc
3540
caggagtcca tcggggaggc agtcaatggc attgtgaagc acttcataa gcctgagaaa
3600
gagcgaggca gtctgacgct gttgctctgt ggagagtgtg gccttgcttc ggccttggaa
3660
caggctttcc agcatggatt taaatcgccc cggtcttca aaaatgtctt catttgggat
3720
ttcctgaaa aagcacaac ctattatgag acattagaga agaatgaagt agtccctgag
3780
gaaaactggc atacaagagc ccggaacttc tgccgatttg tcaactgcaat caacaatact
3840

ccccggaaca tcggcaagga tggcaagttt cagatgctgg tgtgcttggg agccagagat
 3900
 cacctcctac accactggat tgccctgctg gctgactgcc ccatcactgc acacatgtat
 3960
 gaggatgtgg cactgatcaa agaccatata cttgtcaatt ccttgattcg tgtgctgcag
 4020
 acattgcagg agttcaacat cacgctggag acgtcccttg tcaagggcat cgacatctga
 4080
 cctcccagca ccagccagca gcaggactga gaaagactca ccctgcagct ctgacctttt
 4140
 ttcccaaagg gacttaagcg attgtgcagg agtaggagac aaaatgtaca ctactgtaa
 4200
 aaagaaaact agaggatttt tggaataaat aatctatttt agagtttatt tgctgatttg
 4260
 ctttttacac actttcatgt gaaagagtga tagggagagg gagcgaggct ggtgccgctt
 4320
 attttgaagc tggtgccctc cctcgccgtg gccacatgct ggaagcctga ggcctccctg
 4380
 gactgagcct gtggcactgc gtgcgggaca gttatgtttc cttgccccgt cgcattaatg
 4440
 aggcccttcc acatcatttt taaactaatg tttttctata ttaacattat tatggatatt
 4500
 tggctttcat aggccacaca caggtgtgct gcgcgggaag ccccatgctc caatcaaagg
 4560
 gatttttagt agtgcctcta agcaagcacc gatgagtcag tcccacgtat tttctttttt
 4620
 gtcagtattg tttgggaagg agacatgccg ggatgtgtca tcgtgccaaa taccacattt
 4680
 cctgttggca cagtttcaca gaagtaaaca taagcatgtt ttaacagggt tttcttttct
 4740
 tttttctttt ttaaaatgtt ttatttattt aaccgccat tgtgtgtttt taagtatttt
 4800
 ctttttttaa ggaaaggaaa agcttgtcac aatctaactg gctatgttat tattattaaa
 4860
 tttatgtttt gcaacttaga aaccagctac agtatggccc acttaataaa acacctgaaa
 4920
 caaaaaaaaa aaaaaaaaaa aaaaaaaaaa aat
 4953

<210> 3098

<211> 1359

<212> PRT

<213> Homo sapiens

<400> 3098

Arg	His	Pro	Gly	Cys	Gly	Ala	Gly	Arg	Pro	Gly	Ala	Pro	Pro	Pro	Arg
1				5					10					15	
His	Gly	Ser	Arg	Gly	Gly	Arg	Gly	Asp	Arg	Ala	Arg	Ala	Gly	Gly	Gly
			20					25					30		
Gly	Pro	Ser	Arg	Gly	Ser	Gly	Gly	Gly	Gly	Arg	Gly	Gly	Leu	Arg	Ala
		35					40					45			
Asp	Gly	Arg	Ala	Pro	Gly	Leu	Arg	Gly	Leu	Gly	Ala	Ala	Pro	His	Cys
	50					55				60					
Pro	Ala	Gly	Leu	Gly	Pro	Gly	Ala	Met	Ser	Gly	Gly	Gly	Gly	Gly	Gly

65					70					75				80
Gly	Ser	Ala	Pro	Ser	Arg	Phe	Ala	Asp	Tyr	Phe	Val	Ile	Cys	Gly
				85					90					95
Asp	Thr	Glu	Thr	Gly	Leu	Glu	Pro	Asp	Glu	Leu	Ser	Ala	Leu	Cys
			100					105					110	
Tyr	Ile	Gln	Ala	Ser	Lys	Ala	Arg	Asp	Gly	Ala	Ser	Pro	Phe	Ile
		115					120					125		
Ser	Thr	Thr	Glu	Gly	Glu	Asn	Phe	Glu	Gln	Thr	Pro	Leu	Arg	Arg
	130					135					140			
Phe	Lys	Ser	Lys	Val	Leu	Ala	Arg	Tyr	Pro	Glu	Asn	Val	Glu	Trp
145					150					155				160
Pro	Phe	Asp	Gln	Asp	Ala	Val	Gly	Met	Leu	Cys	Met	Pro	Lys	Gly
			165						170					175
Ala	Phe	Lys	Thr	Gln	Ala	Asp	Pro	Arg	Glu	Pro	Gln	Phe	His	Ala
			180					185					190	
Ile	Ile	Thr	Arg	Glu	Asp	Gly	Ser	Arg	Thr	Phe	Gly	Phe	Ala	Leu
		195					200					205		
Phe	Tyr	Glu	Glu	Val	Thr	Ser	Lys	Gln	Ile	Cys	Ser	Ala	Met	Gln
	210					215					220			
Leu	Tyr	His	Met	His	Asn	Ala	Glu	Tyr	Asp	Val	Leu	His	Ala	Pro
225					230					235				240
Ala	Asp	Asp	Arg	Asp	Gln	Ser	Ser	Met	Glu	Asp	Gly	Glu	Asp	Thr
			245						250					255
Val	Thr	Lys	Leu	Gln	Arg	Phe	Asn	Ser	Tyr	Asp	Ile	Ser	Arg	Asp
		260					265						270	
Leu	Tyr	Val	Ser	Lys	Cys	Ile	Cys	Leu	Ile	Thr	Pro	Met	Ser	Phe
	275						280					285		
Lys	Ala	Cys	Arg	Ser	Val	Pro	Gly	Gln	Leu	His	Gln	Ala	Val	Thr
	290					295					300			
Pro	Gln	Pro	Pro	Pro	Leu	Pro	Leu	Glu	Ser	Tyr	Ile	Tyr	Asn	Val
305					310					315				320
Tyr	Glu	Val	Pro	Leu	Pro	Pro	Pro	Gly	Arg	Ser	Leu	Lys	Phe	Ser
			325						330					335
Val	Tyr	Trp	Pro	Ile	Ile	Cys	Gln	Arg	Pro	Ser	Thr	Asn	Glu	Leu
		340						345					350	
Leu	Phe	Asp	Phe	Pro	Val	Lys	Glu	Val	Phe	Glu	Leu	Leu	Gly	Val
		355					360					365		
Asn	Val	Phe	Gln	Leu	Phe	Thr	Cys	Ala	Leu	Leu	Glu	Phe	Gln	Ile
	370					375					380			
Leu	Tyr	Ser	Gln	His	Tyr	Gln	Arg	Leu	Met	Thr	Val	Ala	Glu	Thr
385					390					395				400
Thr	Ala	Leu	Met	Phe	Pro	Phe	Gln	Trp	Gln	His	Val	Tyr	Val	Pro
			405						410					415
Leu	Pro	Ala	Ser	Leu	Leu	His	Phe	Leu	Asp	Ala	Pro	Val	Pro	Tyr
			420					425					430	
Met	Gly	Leu	His	Ser	Asn	Gly	Leu	Asp	Asp	Arg	Ser	Lys	Leu	Glu
	435						440					445		
Pro	Gln	Glu	Ala	Asn	Leu	Cys	Phe	Val	Asp	Ile	Asp	Asn	His	Phe
	450					455					460			
Glu	Leu	Pro	Glu	Asp	Leu	Pro	Gln	Phe	Pro	Asn	Lys	Leu	Glu	Phe
465					470					475				480
Gln	Glu	Val	Ser	Glu	Ile	Leu	Met	Ala	Phe	Gly	Ile	Pro	Pro	Glu
			485						490					495
Asn	Leu	His	Cys	Ser	Glu	Ser	Ala	Ser	Lys	Leu	Lys	Arg	Leu	Arg

500	505	510
Ser Glu Leu Val Ser Asp Lys Arg Asn Gly Asn Ile Ala Gly Ser Pro		
515	520	525
Leu His Ser Tyr Glu Leu Leu Lys Glu Asn Glu Thr Ile Ala Arg Leu		
530	535	540
Gln Ala Leu Val Lys Arg Thr Gly Val Ser Leu Glu Lys Leu Glu Val		
545	550	555
Arg Glu Asp Pro Ser Ser Asn Lys Asp Leu Lys Val Gln Cys Asp Glu		
565	570	575
Glu Glu Leu Arg Ile Tyr Gln Leu Asn Ile Gln Ile Arg Glu Val Phe		
580	585	590
Ala Asn Arg Phe Thr Gln Met Phe Ala Asp Tyr Glu Val Phe Val Ile		
595	600	605
Gln Pro Ser Gln Asp Lys Glu Ser Trp Phe Thr Asn Arg Glu Gln Met		
610	615	620
Gln Asn Phe Asp Lys Ala Ser Phe Leu Ser Asp Gln Pro Glu Pro Tyr		
625	630	635
Leu Pro Phe Leu Ser Arg Phe Leu Glu Thr Gln Met Phe Ala Phe Phe		
645	650	655
Ile Asp Asn Lys Ile Met Cys His Asp Asp Asp Asp Lys Asp Pro Val		
660	665	670
Leu Arg Val Phe Asp Ser Arg Val Asp Lys Ile Arg Leu Leu Asn Val		
675	680	685
Arg Thr Pro Thr Leu Arg Thr Ser Met Tyr Gln Lys Cys Thr Thr Val		
690	695	700
Asp Glu Ala Glu Lys Ala Ile Glu Leu Arg Leu Ala Lys Ile Asp His		
705	710	715
Thr Ala Ile His Pro His Leu Leu Asp Met Lys Ile Gly Gln Gly Lys		
725	730	735
Tyr Glu Pro Gly Phe Phe Pro Lys Leu Gln Ser Asp Val Leu Cys Thr		
740	745	750
Gly Pro Ala Ser Asn Lys Trp Thr Lys Arg Asn Ala Pro Ala Gln Trp		
755	760	765
Arg Arg Lys Asp Arg Gln Lys Gln His Thr Glu His Leu Arg Leu Asp		
770	775	780
Asn Asp Gln Arg Glu Lys Tyr Ile Gln Glu Ala Arg Thr Met Gly Ser		
785	790	795
Thr Ile Arg Gln Pro Lys Leu Ser Asn Leu Ser Pro Ser Val Ile Ala		
805	810	815
Gln Thr Asn Trp Lys Phe Val Glu Gly Leu Leu Lys Glu Cys Arg Asn		
820	825	830
Lys Thr Lys Arg Met Leu Val Glu Lys Met Gly Arg Glu Ala Val Glu		
835	840	845
Leu Gly His Gly Glu Val Asn Ile Thr Gly Val Glu Glu Asn Thr Leu		
850	855	860
Ile Ala Ser Leu Cys Asp Leu Leu Glu Arg Ile Trp Ser His Gly Leu		
865	870	875
Gln Val Lys Gln Gly Lys Ser Ala Leu Trp Ser His Leu Leu His Tyr		
885	890	895
Gln Asp Asn Arg Gln Arg Lys Leu Thr Ser Gly Ser Leu Ser Thr Ser		
900	905	910
Gly Ile Leu Leu Asp Ser Glu Arg Arg Lys Ser Asp Ala Ser Ser Leu		
915	920	925
Met Pro Pro Leu Arg Ile Ser Leu Ile Gln Asp Met Arg His Ile Gln		

930	935	940
Asn Ile Gly Glu Ile Lys Thr Asp Val Gly Lys Ala Arg Ala Trp Val		
945	950	955
Arg Leu Ser Met Glu Lys Lys Leu Leu Ser Arg His Leu Lys Gln Leu		960
	965	970
Leu Ser Asp His Glu Leu Thr Lys Lys Leu Tyr Lys Arg Tyr Ala Phe		975
	980	985
Leu Arg Cys Asp Asp Glu Lys Glu Gln Phe Leu Tyr His Leu Leu Ser		990
	995	1000
Phe Asn Ala Val Asp Tyr Phe Cys Phe Thr Asn Val Phe Thr Thr Ile		1005
	1010	1015
Leu Ile Pro Tyr His Ile Leu Ile Val Pro Ser Lys Lys Leu Gly Gly		1020
1025	1030	1035
Ser Met Phe Thr Ala Asn Pro Trp Ile Cys Ile Ser Gly Glu Leu Gly		1040
	1045	1050
Glu Thr Gln Ile Met Gln Ile Pro Arg Asn Val Leu Glu Met Thr Phe		1055
	1060	1065
Glu Cys Gln Asn Leu Gly Lys Leu Thr Thr Val Gln Ile Gly His Asp		1070
	1075	1080
Asn Ser Gly Leu Tyr Ala Lys Trp Leu Val Glu Tyr Val Met Val Arg		1085
	1090	1095
Asn Glu Ile Thr Gly His Thr Tyr Lys Phe Pro Cys Gly Arg Trp Leu		1100
1105	1110	1115
Gly Lys Gly Met Asp Asp Gly Ser Leu Glu Arg Ile Leu Val Gly Glu		1120
	1125	1130
Leu Leu Thr Ser Gln Pro Glu Val Asp Glu Arg Pro Cys Arg Thr Pro		1135
	1140	1145
Pro Leu Gln Gln Ser Pro Ser Val Ile Arg Arg Leu Val Thr Ile Ser		1150
	1155	1160
Pro Asn Asn Lys Pro Lys Leu Asn Thr Gly Gln Ile Gln Glu Ser Ile		1165
	1170	1175
Gly Glu Ala Val Asn Gly Ile Val Lys His Phe His Lys Pro Glu Lys		1180
1185	1190	1195
Glu Arg Gly Ser Leu Thr Leu Leu Leu Cys Gly Glu Cys Gly Leu Val		1200
	1205	1210
Ser Ala Leu Glu Gln Ala Phe Gln His Gly Phe Lys Ser Pro Arg Leu		1215
	1220	1225
Phe Lys Asn Val Phe Ile Trp Asp Phe Leu Glu Lys Ala Gln Thr Tyr		1230
	1235	1240
Tyr Glu Thr Leu Glu Lys Asn Glu Val Val Pro Glu Glu Asn Trp His		1245
	1250	1255
Thr Arg Ala Arg Asn Phe Cys Arg Phe Val Thr Ala Ile Asn Asn Thr		1260
1265	1270	1275
Pro Arg Asn Ile Gly Lys Asp Gly Lys Phe Gln Met Leu Val Cys Leu		1280
	1285	1290
Gly Ala Arg Asp His Leu Leu His His Trp Ile Ala Leu Leu Ala Asp		1295
	1300	1305
Cys Pro Ile Thr Ala His Met Tyr Glu Asp Val Ala Leu Ile Lys Asp		1310
	1315	1320
His Thr Leu Val Asn Ser Leu Ile Arg Val Leu Gln Thr Leu Gln Glu		1325
	1330	1335
Phe Asn Ile Thr Leu Glu Thr Ser Leu Val Lys Gly Ile Asp Ile		1340
1345	1350	1355

<210> 3099
 <211> 1001
 <212> DNA
 <213> Homo sapiens

<400> 3099
 nccatggtag tggcaattta tgcctattac aagaaacaga gaaccaaacc agatgtgtac
 60
 atcctgaatt tggctgtagc agatttactc cttctattca ctctgccttt ttgggctggt
 120
 aatgcagttc atgggtgggt tttagggaata ataatgtgca aaataacttc agccttgtac
 180
 acactaaact ttgtctctgg aatgcagttt ctggcttgta tcagcataga cagatatgtg
 240
 gcagtaacta aagtccccag ccaatcagga gtgggaaaac catgctggat catctgtttc
 300
 tgtgtctgga tggctgccat cttgctgagc atacccagc tggtttttta tacagtaaat
 360
 gacaatgcta ggtgcattcc cattttcccc cgctacctag gaacatcaat gaaagcattg
 420
 attcacatgc tagagatctg cattggattt gtagtacctt ttcttattat ggggggtgtg
 480
 tactttatca cagcaaggac actcatgaag atgccaaaca ttaaaatata tcgaccctta
 540
 aaagttctgc tcacagtcgt tatagttttc attgtcactc aactgcctta taacattgtc
 600
 aagttctgcc gagccataga catcatctac tccctgatca ccagctgcaa catgagcaaa
 660
 cgcatggaca tcgccatcca agtcacagaa agcatcgcac tctttcacag ctgcctcaac
 720
 ccaatccttt atgtttttat gggagcatct ttcaaaaact acgttatgaa agtggccaag
 780
 aaatatgggt cctggagaag acagagacaa agtgtggagg agtttccttt tgattctgag
 840
 ggtcctacag agccaaccag tacttttagc atttaaagggt aaaactgctc tgccttttgc
 900
 ttggatacat atgaatgatg ctttcccctc aaataaaaca tctgcattat tctgaaactc
 960
 aaatctcaga cgccgtgggt gcaacttata ataaagaatg g
 1001

<210> 3100
 <211> 159
 <212> PRT
 <213> Homo sapiens

<400> 3100
 Xaa Met Val Val Ala Ile Tyr Ala Tyr Tyr Lys Lys Gln Arg Thr Lys
 1 5 10 15
 Thr Asp Val Tyr Ile Leu Asn Leu Ala Val Ala Asp Leu Leu Leu Leu
 20 25 30
 Phe Thr Leu Pro Phe Trp Ala Val Asn Ala Val His Gly Trp Val Leu
 35 40 45
 Gly Lys Ile Met Cys Lys Ile Thr Ser Ala Leu Tyr Thr Leu Asn Phe

50	55	60
Val Ser Gly Met Gln Phe Leu Ala Cys Ile Ser Ile Asp Arg Tyr Val		
65	70	75
Ala Val Thr Lys Val Pro Ser Gln Ser Gly Val Gly Lys Pro Cys Trp		80
	85	90
Ile Ile Cys Phe Cys Val Trp Met Ala Ala Ile Leu Leu Ser Ile Pro		95
	100	105
Gln Leu Val Phe Tyr Thr Val Asn Asp Asn Ala Arg Cys Ile Pro Ile		110
	115	120
Phe Pro Arg Tyr Leu Gly Thr Ser Met Lys Ala Leu Ile His Met Leu		125
	130	135
Glu Ile Cys Ile Gly Phe Val Val Pro Phe Leu Ile Met Gly Val		140
145	150	155

<210> 3101
 <211> 2623
 <212> DNA
 <213> Homo sapiens

<400> 3101
 cggcgccgag tagccggggc gggccggagc gcgggcgcg cgagggcagc tgcgcccggc
 60
 tcttccccctc ccaggccccg ccccccgccc gggccccggc gatggtgaca catgcggcgg
 120
 cggccgcgcg gcaggaccat ggttgagcgc gccagcaagt tcgtgctggt ggtggcgggc
 180
 tcggtgtgct tcatgctcat cttgtaccag tacgcggggc caggactgag cctgggcgcg
 240
 cccggcgggc gcgcgccgcc cgacgacctg gacctgttcc ccacaccga cccccactac
 300
 gagaagaagt actacttccc ggtccgcgag ctggagcgct cgetgcgctt cgacatgaag
 360
 ggcgacgacg tgatcgtctt cctgcacatc cagaagacgg gcggcaccac cttcggccgc
 420
 cacctcgtgc agaacgtacg cctcgagggtg ccgtgcgact gccggccccg ccagaagaag
 480
 tgcacctgct accggcccaa ccgcccgcgag acttggtctt tctcccgtt ctccaccggc
 540
 tggagctgcg ggctgcacgc cgactggacc gagctcacca actgcgtgcc cggcgtgctg
 600
 gaccgcccgc actccgcgcg gctgcgcacg cccaggaagt tctactacat caccctgcta
 660
 cgagacccccg tgtcccgtta cctgagcgag tggcggcatg tgcagagggg tgccacgtgg
 720
 aagacgtctt tgcatatgtg tgatgggagc acgcccacgc ctgaggagct gccgccctgc
 780
 tacgagggca cggactggtc gggctgcacg ctacaggagt tcatggactg cccgtacaac
 840
 ctggccaaca accgccaggt gcgcatgctg gccgacctga gcctgggtggg ctgctacaac
 900
 ctgtccttca tccccgaggg caagcggggc cagctgctgc tcgagagcgc caagaagaac
 960
 ctgcggggca tggccttctt cggcctgacc gagttccagc gcaagacgca gtacctgttc
 1020

gagcggacgt tcaacctcaa gttcatccgg cccttcatgc agtacaatag cacgcgggcg
1080
ggcggcggtgg aggtggatga agacaccatc cggcgcatcg aggagctcaa cgacctggac
1140
atgcagctgt acgactacgc caaggacctc ttccagcagc gctaccagta caagcggcag
1200
ctggagcgca gggagcagcg cctgaggagc cgcgaggagc gtctgctgca ccggggccaag
1260
gaggcaactgc cgcgggagga tgccgacgag ccggggccgcg tgcccaccga ggactacatg
1320
agccacatca ttgagaagtg gtagtggcgg tggtagccac ggggaggcct cttgggggggt
1380
gtgggggata aaacaggaca gacgacaggt ccacccaaga ctgtcaagggt atgagcatcc
1440
caaacctgct ccacagaggt agctgcgtcc tgaaaaaaaa cagagcaggg atgtagtggg
1500
gctgggcagg gatgggggct tgagaaatca acaggtgcag ccagtggggt cagaggaaag
1560
cgtgctcgaa ggatgccatg gtcagggcag ggcctccaga gcaggtgttg tgccctggagc
1620
tgctctcctg gcctccttgg atttatcgca aaaactgaag gtttgcgcaa gagacgagga
1680
cagcggaaag tggacctgcc aggcggggag tgtgtccctc accaactatg cacacagcac
1740
tcgctcttag ctccctctgtc cgggctacta ggagtgcagc cagcttctgg caactgcccc
1800
agctccaggc catcccatag cccctcctct tctggctgcc cccaatgccc cgaggcctgg
1860
ggagccccca gctcacccat ctgtagctcc ctcaaagtca gggcccaccc catctgaggc
1920
agagaagact cgagtccagc ccccaggaag cctgctcccc tctctggccc atggtcctgc
1980
ttcatgcttt gggtcaggag gccaaagctg atgttcaggc cccaccact ccctacagtc
2040
ctcagaccaa ggagggggttt gggtagtagg ccgagctgc attgccggcc ttccctcgggc
2100
caactggcag cccaggagtg gggaggcttt ggccagggat gctgccactt gtgcgtgagt
2160
ccgcggctgg cccttgaggg tgaccatcca ggcaggcctg gctcagactg gaagggtg
2220
ggaccgaggg ctccccctgcc tctgttctcc tttctgaccc actgggattt gctagcaggc
2280
tgccccagcc ccataccga aacacatact caagagctct ccttgcatth cccatgctc
2340
cccacccct ggcaaaaggc tggccatgct ctgttcccag cagcctcgca ggtttccca
2400
ctggctgcaa tggccctact aaaagccatg ttgcatatcc gttgtaagca cgtgccctgt
2460
gctctgtccc cattccttat gccctaggag gccaaagtgg tgtctctagg agggcccaca
2520
caggcacct ggatccccca gagagcagat tgggtgtgctc aggcgcgagg ctgactcaga
2580
ggtaggggca gtgggctctg caggccacct ggctgggggtt ggg
2623

<210> 3102
 <211> 410
 <212> PRT
 <213> Homo sapiens

<400> 3102

Met	Arg	Arg	Arg	Pro	Arg	Gly	Arg	Thr	Met	Val	Glu	Arg	Ala	Ser	Lys
1				5					10					15	
Phe	Val	Leu	Val	Val	Ala	Gly	Ser	Val	Cys	Phe	Met	Leu	Ile	Leu	Tyr
		20						25					30		
Gln	Tyr	Ala	Gly	Pro	Gly	Leu	Ser	Leu	Gly	Ala	Pro	Gly	Gly	Arg	Ala
		35					40					45			
Pro	Pro	Asp	Asp	Leu	Asp	Leu	Phe	Pro	Thr	Pro	Asp	Pro	His	Tyr	Glu
	50					55					60				
Lys	Lys	Tyr	Tyr	Phe	Pro	Val	Arg	Glu	Leu	Glu	Arg	Ser	Leu	Arg	Phe
65					70					75					80
Asp	Met	Lys	Gly	Asp	Asp	Val	Ile	Val	Phe	Leu	His	Ile	Gln	Lys	Thr
				85					90					95	
Gly	Gly	Thr	Thr	Phe	Gly	Arg	His	Leu	Val	Gln	Asn	Val	Arg	Leu	Glu
			100					105					110		
Val	Pro	Cys	Asp	Cys	Arg	Pro	Gly	Gln	Lys	Lys	Cys	Thr	Cys	Tyr	Arg
		115					120					125			
Pro	Asn	Arg	Arg	Glu	Thr	Trp	Leu	Phe	Ser	Arg	Phe	Ser	Thr	Gly	Trp
	130					135					140				
Ser	Cys	Gly	Leu	His	Ala	Asp	Trp	Thr	Glu	Leu	Thr	Asn	Cys	Val	Pro
145					150					155					160
Gly	Val	Leu	Asp	Arg	Arg	Asp	Ser	Ala	Ala	Leu	Arg	Thr	Pro	Arg	Lys
				165					170					175	
Phe	Tyr	Tyr	Ile	Thr	Leu	Leu	Arg	Asp	Pro	Val	Ser	Arg	Tyr	Leu	Ser
			180					185					190		
Glu	Trp	Arg	His	Val	Gln	Arg	Gly	Ala	Thr	Trp	Lys	Thr	Ser	Leu	His
		195					200					205			
Met	Cys	Asp	Gly	Arg	Thr	Pro	Thr	Pro	Glu	Glu	Leu	Pro	Pro	Cys	Tyr
	210					215					220				
Glu	Gly	Thr	Asp	Trp	Ser	Gly	Cys	Thr	Leu	Gln	Glu	Phe	Met	Asp	Cys
225					230					235				240	
Pro	Tyr	Asn	Leu	Ala	Asn	Asn	Arg	Gln	Val	Arg	Met	Leu	Ala	Asp	Leu
				245					250					255	
Ser	Leu	Val	Gly	Cys	Tyr	Asn	Leu	Ser	Phe	Ile	Pro	Glu	Gly	Lys	Arg
			260				265						270		
Ala	Gln	Leu	Leu	Leu	Glu	Ser	Ala	Lys	Lys	Asn	Leu	Arg	Gly	Met	Ala
		275					280					285			
Phe	Phe	Gly	Leu	Thr	Glu	Phe	Gln	Arg	Lys	Thr	Gln	Tyr	Leu	Phe	Glu
	290					295					300				
Arg	Thr	Phe	Asn	Leu	Lys	Phe	Ile	Arg	Pro	Phe	Met	Gln	Tyr	Asn	Ser
305					310					315				320	
Thr	Arg	Ala	Gly	Gly	Val	Glu	Val	Asp	Glu	Asp	Thr	Ile	Arg	Arg	Ile
				325					330					335	
Glu	Glu	Leu	Asn	Asp	Leu	Asp	Met	Gln	Leu	Tyr	Asp	Tyr	Ala	Lys	Asp
			340				345						350		
Leu	Phe	Gln	Gln	Arg	Tyr	Gln	Tyr	Lys	Arg	Gln	Leu	Glu	Arg	Arg	Glu
		355				360						365			
Gln	Arg	Leu	Arg	Ser	Arg	Glu	Glu	Arg	Leu	Leu	His	Arg	Ala	Lys	Glu

370	375	380
Ala Leu Pro Arg Glu Asp	Ala Asp Glu Pro Gly	Arg Val Pro Thr Glu
385	390	395
Asp Tyr Met Ser His	Ile Ile Glu Lys Trp	400
405	410	

<210> 3103
 <211> 1228
 <212> DNA
 <213> Homo sapiens

<400> 3103
 ctcgagctgg atccaccctt gagccttcac ctggagagtc ctctgcacaa gttcagagag
 60
 aaggactacg cgcagcaatg gttctcatca gggggcaact tcgccctcac atgcctctcc
 120
 caaccccgct gggacactag gccgcggctg ggggaagcgg gagggagaat gttatccccc
 180
 tggcatgtgt ctagtacgag gagagacag atgctgctaa acaccttgca atccacggtg
 240
 ggagggcccc tccccaccc cgaagtagcc attcggcaga ggtggagaaa ctgcggtgta
 300
 gatcaatgcc cacgcacttg gccgacggaa atcacgaatt ggtgaccaat tggatcttgg
 360
 atctgaggaa aaagctccag cttcagaggg aactctcgaa gttttgcccc gagcaaacgg
 420
 aggggttgcg ttgccatcgc ctaaaatggg aaaatggcag gcgtcacagg ttgcagggga
 480
 aggttgaggaga ccagttgagt gccccggagc cttcctggaa agagtttcct atccagcccc
 540
 cctcggtttc cgcattccgtc tgattcctta tgatgttgag ggtgccgggg tctgggtcct
 600
 ttatgatgca gagggtgccc ccgtctcacc tcgggcgcct ccccgctccc gcctcctcct
 660
 ggcaacctgg tgggcggctc cggacccggc gacccgcgac catcttgta gttgctgccg
 720
 cctggcaaag ggcattctcta ggccagtggg gnagacggcc ggtggccgca ctgcctccat
 780
 actcggactc cctcgtggag cccttgggtg gtcgcctgca ggttcttttt ttgaagaaag
 840
 caggagtgga acggccttgt gagacgactc caggagcaaa gggagactct cacaagaccc
 900
 aagtcctcct agagcacagg aaagtgtcgc ttcaggctga agaagggaga gaaagcagct
 960
 ttccgcatct gcatggttgt ctagtggcta ggattcgggtg ctgaaagcgc cacggcccgg
 1020
 gttcgattcc cggtcaggga attgttttgc actggccgcc ctcccgcagg aatcttcctt
 1080
 taccacgctg tcagccggcc tgctccaagg gccagatgta gaacagcctc cgcagcgagg
 1140
 ggcaaaccgg ggcaaaggag ggcaagtcgt ggtggggcac ctctcacgac acaccgttcc
 1200
 tgtttatctc cgtgtccgtc atccgcgg
 1228

<210> 3104
 <211> 144
 <212> PRT
 <213> Homo sapiens

<400> 3104
 Met Met Leu Arg Val Pro Gly Ser Gly Ser Phe Met Met Gln Arg Val
 1 5 10 15
 Pro Pro Ser His Leu Gly Arg Leu Pro Ala Pro Ala Ser Ser Trp Gln
 20 25 30
 Pro Gly Gly Arg Leu Arg Thr Arg Arg Pro Ala Thr Ile Leu Ser Val
 35 40 45
 Ala Ala Ala Trp Gln Arg Ala Ser Leu Gly Gln Trp Xaa Arg Arg Pro
 50 55 60
 Val Ala Ala Leu Ala Pro Tyr Ser Asp Ser Leu Val Glu Pro Leu Val
 65 70 75 80
 Cys Arg Leu Gln Val Leu Phe Leu Lys Lys Ala Gly Ser Glu Arg Pro
 85 90 95
 Cys Glu Thr Thr Pro Gly Ala Lys Gly Asp Ser His Lys Thr Gln Val
 100 105 110
 Leu Leu Glu His Arg Lys Val Ser Leu Gln Val Glu Glu Gly Arg Glu
 115 120 125
 Ser Ser Phe Pro His Leu His Gly Cys Leu Val Ala Arg Ile Arg Cys
 130 135 140

<210> 3105
 <211> 4924
 <212> DNA
 <213> Homo sapiens

<400> 3105
 ngcccgaac ccggaagtga gcggcgagc ctgcgaggct cggagaaaca ggcgccgcgg
 60
 gctccgcgcc cggccggacc cgggcccag atcatgatgc tgccgccacc gccgccacca
 120
 cggagcgaga agcccagata gacgccccgg cggccccggg tcttgagtc ccgccgctg
 180
 ctgcccggcc gaggacccca cccgcctgc cgcgcgatgc ttgcagtggg gcccgccatg
 240
 gacagggatt acccgagca tgaacccccg ccggcgggca gcctcctgta cagcccgcg
 300
 ccctgcaga gcgccatgct gactgcccc tactggaaca ccttctcgt gccgccatac
 360
 cctgccttct ccagcgacag ccgcccgttc atgagctccg cctccttct cggcagccag
 420
 ccctgcccag acaccagcta tgccccgtg gccaccgcct ccagcttgcc accaaagacc
 480
 tgcgactttg ctcaggactc ctctatattt gaggacttct ccaacatctc catcttctcc
 540
 tcgtccgtgg actccctgtc ggacatcgtg gacacgcccg acttcctgcc ggctgacagc
 600
 ctcaaccagg tgtccaccat ctgggacgat aaccctgccc cctccacca cgataagctg
 660

ttccagctca gcaggccgtt tgcaggcttc gaggactttc tgccctccca cagcaccctg
720
cttctcgtca gctaccagga gcagagtgtg cagagccagc cagaggagga ggacgaggct
780
gaggaggagg aggcggagga gctggggcac acagagacct acgccgacta cgtgccgtcc
840
aagtccaaga tcgggaagca gcaccagac cgcggtggtg agaccagcac actgtccagc
900
gtcccacccc cagacatcac ctacacctg gccctgccct cggacagcgg ggccctgtct
960
gccctgcagc tagaggccat cacctacgcc tgccagcaac acgaggctct gctccccage
1020
gggcagcgcg cgggctttct catcggcgat ggggccggcg tgggcaaagg ccggacggtg
1080
gccggagtca tcctggagaa ccacctgcgc ggccggaaga aagcattgtg gttcagcgtc
1140
tccaacgacc ttaagtacga tgcggagcgc gacctgcggg acatcgaagc cacgggcatc
1200
gcggtgcacg cgctcagcaa gatcaagtac ggtgacacca ctacctcaga gggcgctctc
1260
ttcgccacct actccgccct gattggggag agccaggccg gcggccagca ccgcactcgc
1320
ctccggcaga tcctggactg gtgtggggag gcctttgagg gcgtcatcgt gttcgacgag
1380
tgtcaciaag ccaagaatgc cggctccacc aagatgggca aggcctgtgt agacctgcag
1440
aacaagctgc ccctggcccc cgtggtctac gccagcgcca caggtaacct tgagcctcgg
1500
aacatgatct acatgagccg cttgggtatc tggggcgagg gcacaccctt ccggaacttt
1560
gaggagtcc tgcacgccat cgagaagagg ggcgttggcg ccatggagat cgtggccatg
1620
gacatgaagg tcagcggcat gtacatcgca cgccagctca gcttctccgg cgtcaccttc
1680
cgcacagagg agatcccgtt ggccccagcc ttcgagtgcg tctacaaccg cgcagccctg
1740
ctgtggggcg aggcctgaa cgtgttccag caggcggccg actggatcgg cctggagtcg
1800
cgcaagtccc tgtggggcca gttctggtcg gcacaccagc gcttcttcaa gtatctgtgc
1860
atcgagcca aggtgcgccg gctggtggag ctggcccag aggagctggc gcgagacaag
1920
tgcggtgtca tcgggtgtca gtccacgggc gaggcgcgca cgcgggaggt gctgggggag
1980
aacgatgggc acctcaactg cttegtctcg gccgtgaag gcgtgttctt gtcgctaatt
2040
cagaagcact ttccgtccac caagagaaag cgggacagag gagcgggcag caagcggaaa
2100
cggcgacctc ggggacgcgg ggccaaagcc ccccggtcgg cgtgcgagac agcggggcgtc
2160
atccgcatca gtgacgacag cagcacggag tcggaccctg gcctggacag cgacttcaac
2220
tcttcccccg agtccttggg ggatgacgac gttgtcatcg ttgatgcagt cgggctcccc
2280

agtgacgacc ggggatccct gtgcctcctg cagagagacc cgcattggccc cggggtcctg
2340
gagcgggtgg agcggctgaa gcaggatctg ctggacaaaag tgcgccggct gggccgggaa
2400
ctgccagtca acaccctgga cgagctcatc gaccagctgg gcggccccca gcgggtggcg
2460
gagatgaccg gcaggaaaagg ccgctgtgtg tccaggccccg acgggacggg ggccttcgag
2520
tcgcgggcag agcagggtct gtccatcgac cacgtgaacc tcaggagagaa gcagcgcttc
2580
atgagcggcg agaagctcgt ggccatcatc tcggaggcct ccagctcggg tgtctccctc
2640
caagccgacc gccgtgtcca gaaccagcgg cgcgcgtgc acatgacctt ggagctgccg
2700
tgagcgcgg accgcgccat ccagcagttc ggccgcaccc accggtccaa ccaggctctcc
2760
gcgccagagt atgtcttcct catctcggag ctggccgggg agcgcgggtt cgcctccatc
2820
gtggccaagc gcctggagag tctggggggc ctgaccacg gagaccgcg cgcacggag
2880
tcccgtagc tcagcaagta caactttgag aacaagtatg gcaccggggc cctgcactgt
2940
gtcctcacca ccattcctgag ccagactgag aacaaagtgc ctgtgcccc a gggataccct
3000
ggaggggtcc ccaccttctt ccgggacatg aagcaggggc tgctgtctgt gggcatttgt
3060
ggccgggagt cccggaatgg ctgcctggac gtggagaagg actgttccat caccaagttc
3120
ctgaaccgca tcctggggct ggaggtgcac aagcagaacg ccctgttcca gtactttctca
3180
gacaccttcg accacctcat cgagatggac aagcgggagg gcaaatacga catgggcatc
3240
ctggaccttg ctcccggtat cgaggagatc tacgaggaga gccagcagggt gttcctggct
3300
cccgggcacc cgcaggacgg gcaggtggtc ttctacaaga tcagcgtgga ccgcggcctg
3360
aagtgggagg acgcctttgc caagtcgctg gcgctgacgg gcccctatga cggcttctac
3420
ctctcctaca aggtccgagg taacaagccc agctgcctgc tggcggagca gaaccgcggc
3480
cagttcttca cgggtgtacaa gcccacatc ggccggcaga gccagctgga ggcctggac
3540
agctccgcc gcaagttcca ccgggtcacc gcggaggagg ccaaggagcc ctgggagagt
3600
ggctacgctt tgtcgtgac gcaactgcag cacagcgctt ggaaccggca ctgccggctg
3660
gcgcaggagg gtaaggactg cctgcagggg ctgcggctgc ggcaccacta catgctgtgc
3720
ggcgcgtgc tgcgcgtgtg gggccgcac gccgcgtca tggccgacgt cagcagcagc
3780
agctacctgc agatcgtgcg gctgaagacc aaggacagga agaagcaagt gggcatcaag
3840
atccccgagg gctgcgtgcg ccgggtgctg caggagctgc ggctgatgga tgcggacgtg
3900

aagcgcaggc aggcgcccgc cctgggctgc cccgccccgc ccgccccgcg cccgctggcg
3960
ctgccttgcg gccccggaga ggtgctggac ctcacctaca gccccccggc cgaggccttc
4020
ccgcccgcgc cgcacttctc tttcccggcg ccgctgtccc tggacgccgg ccccggcgtc
4080
gtgccgctgg gcacccccga cgcccaggcc gacctgagg ccctcgcgca ccagggctgc
4140
gacatcaact tcaaggaggt gctggaggac atgctgcgct cgctgcacgc ggggccgccc
4200
tccgagggcg cgctggggga gggcgcgggg gcggggggcg cggcggggcg tgggtcccgag
4260
cggcagagcg tgatccagtt cagcccaccc ttccccggcg ccagggctcc tctctgacac
4320
gccttttaggc gaaacatgcc ccaagacaca gggaccgttt ctcccctagg agcagcggtg
4380
gggagcaggg ccaagggtccc ctgaccactg ctcagaggag ccctaggccc tggccgcagc
4440
gccttcagcg cccgaccgcg gccccacct ggtcagccct ggcgggggccc actcaggaca
4500
gctggggggc ggggcgtggc agggccctct ctgtgcctct cctcccaagt aggaaggggc
4560
tccgggtggc tgctctggga ctgggcaccc acaagggtc agtggggcca aacccttgaa
4620
atccgtgaaa ccgggtggtc ccaagagcta gaaactcagg aaaccccagg tgctcagggc
4680
ccgcgtctc gggggctccg tggggcagac ccctgcta atatgcaatt ctccctcccc
4740
cagcccttcc ctgacccta agttattgcc cgctcacctc tcccaggccc caggccgcgg
4800
agctggcagg gtggcgccctg cggtttctat gtatttatag caagttctga tgtacatatg
4860
taaaggactt ttttaaatat atgtgccttt tgcctacttc caaaaaaaaa aaaaaaaaaa
4920
aacc
4924

<210> 3106

<211> 1366

<212> PRT

<213> Homo sapiens

<400> 3106

Met	Leu	Ala	Val	Gly	Pro	Ala	Met	Asp	Arg	Asp	Tyr	Pro	Gln	His	Glu
1				5				10					15		
Pro	Pro	Pro	Ala	Gly	Ser	Leu	Leu	Tyr	Ser	Pro	Pro	Pro	Leu	Gln	Ser
			20					25					30		
Ala	Met	Leu	His	Cys	Pro	Tyr	Trp	Asn	Thr	Phe	Ser	Leu	Pro	Pro	Tyr
		35					40					45			
Pro	Ala	Phe	Ser	Ser	Asp	Ser	Arg	Pro	Phe	Met	Ser	Ser	Ala	Ser	Phe
	50					55					60				
Leu	Gly	Ser	Gln	Pro	Cys	Pro	Asp	Thr	Ser	Tyr	Ala	Pro	Val	Ala	Thr
65					70					75				80	
Ala	Ser	Ser	Leu	Pro	Pro	Lys	Thr	Cys	Asp	Phe	Ala	Gln	Asp	Ser	Ser

2325

515	520	525
Arg Lys Ser Leu Trp Gly Gln Phe Trp Ser Ala His Gln Arg Phe Phe		
530	535	540
Lys Tyr Leu Cys Ile Ala Ala Lys Val Arg Arg Leu Val Glu Leu Ala		
545	550	555
Arg Glu Glu Leu Ala Arg Asp Lys Cys Val Val Ile Gly Leu Gln Ser		
565	570	575
Thr Gly Glu Ala Arg Thr Arg Glu Val Leu Gly Glu Asn Asp Gly His		
580	585	590
Leu Asn Cys Phe Val Ser Ala Ala Glu Gly Val Phe Leu Ser Leu Ile		
595	600	605
Gln Lys His Phe Pro Ser Thr Lys Arg Lys Arg Asp Arg Gly Ala Gly		
610	615	620
Ser Lys Arg Lys Arg Arg Pro Arg Gly Arg Gly Ala Lys Ala Pro Arg		
625	630	635
Leu Ala Cys Glu Thr Ala Gly Val Ile Arg Ile Ser Asp Asp Ser Ser		
645	650	655
Thr Glu Ser Asp Pro Gly Leu Asp Ser Asp Phe Asn Ser Ser Pro Glu		
660	665	670
Ser Leu Val Asp Asp Asp Val Val Ile Val Asp Ala Val Gly Leu Pro		
675	680	685
Ser Asp Asp Arg Gly Ser Leu Cys Leu Leu Gln Arg Asp Pro His Gly		
690	695	700
Pro Gly Val Leu Glu Arg Val Glu Arg Leu Lys Gln Asp Leu Leu Asp		
705	710	715
Lys Val Arg Arg Leu Gly Arg Glu Leu Pro Val Asn Thr Leu Asp Glu		
725	730	735
Leu Ile Asp Gln Leu Gly Gly Pro Gln Arg Val Ala Glu Met Thr Gly		
740	745	750
Arg Lys Gly Arg Val Val Ser Arg Pro Asp Gly Thr Val Ala Phe Glu		
755	760	765
Ser Arg Ala Glu Gln Gly Leu Ser Ile Asp His Val Asn Leu Arg Glu		
770	775	780
Lys Gln Arg Phe Met Ser Gly Glu Lys Leu Val Ala Ile Ile Ser Glu		
785	790	795
Ala Ser Ser Ser Gly Val Ser Leu Gln Ala Asp Arg Arg Val Gln Asn		
805	810	815
Gln Arg Arg Arg Val His Met Thr Leu Glu Leu Pro Trp Ser Ala Asp		
820	825	830
Arg Ala Ile Gln Gln Phe Gly Arg Thr His Arg Ser Asn Gln Val Ser		
835	840	845
Ala Pro Glu Tyr Val Phe Leu Ile Ser Glu Leu Ala Gly Glu Arg Arg		
850	855	860
Phe Ala Ser Ile Val Ala Lys Arg Leu Glu Ser Leu Gly Ala Leu Thr		
865	870	875
His Gly Asp Arg Arg Ala Thr Glu Ser Arg Asp Leu Ser Lys Tyr Asn		
885	890	895
Phe Glu Asn Lys Tyr Gly Thr Arg Ala Leu His Cys Val Leu Thr Thr		
900	905	910
Ile Leu Ser Gln Thr Glu Asn Lys Val Pro Val Pro Gln Gly Tyr Pro		
915	920	925
Gly Gly Val Pro Thr Phe Phe Arg Asp Met Lys Gln Gly Leu Leu Ser		
930	935	940
Val Gly Ile Gly Gly Arg Glu Ser Arg Asn Gly Cys Leu Asp Val Glu		

945		950		955		960									
Lys	Asp	Cys	Ser	Ile	Thr	Lys	Phe	Leu	Asn	Arg	Ile	Leu	Gly	Leu	Glu
		965							970					975	
Val	His	Lys	Gln	Asn	Ala	Leu	Phe	Gln	Tyr	Phe	Ser	Asp	Thr	Phe	Asp
		980						985					990		
His	Leu	Ile	Glu	Met	Asp	Lys	Arg	Glu	Gly	Lys	Tyr	Asp	Met	Gly	Ile
		995					1000					1005			
Leu	Asp	Leu	Ala	Pro	Gly	Ile	Glu	Glu	Ile	Tyr	Glu	Glu	Ser	Gln	Gln
	1010					1015					1020				
Val	Phe	Leu	Ala	Pro	Gly	His	Pro	Gln	Asp	Gly	Gln	Val	Val	Phe	Tyr
1025					1030					1035					1040
Lys	Ile	Ser	Val	Asp	Arg	Gly	Leu	Lys	Trp	Glu	Asp	Ala	Phe	Ala	Lys
			1045					1050					1055		
Ser	Leu	Ala	Leu	Thr	Gly	Pro	Tyr	Asp	Gly	Phe	Tyr	Leu	Ser	Tyr	Lys
		1060						1065					1070		
Val	Arg	Gly	Asn	Lys	Pro	Ser	Cys	Leu	Leu	Ala	Glu	Gln	Asn	Arg	Gly
	1075						1080					1085			
Gln	Phe	Phe	Thr	Val	Tyr	Lys	Pro	Asn	Ile	Gly	Arg	Gln	Ser	Gln	Leu
	1090					1095					1100				
Glu	Ala	Leu	Asp	Ser	Leu	Arg	Arg	Lys	Phe	His	Arg	Val	Thr	Ala	Glu
1105					1110					1115				1120	
Glu	Ala	Lys	Glu	Pro	Trp	Glu	Ser	Gly	Tyr	Ala	Leu	Ser	Leu	Thr	His
			1125					1130					1135		
Cys	Ser	His	Ser	Ala	Trp	Asn	Arg	His	Cys	Arg	Leu	Ala	Gln	Glu	Gly
		1140					1145					1150			
Lys	Asp	Cys	Leu	Gln	Gly	Leu	Arg	Leu	Arg	His	His	Tyr	Met	Leu	Cys
	1155					1160					1165				
Gly	Ala	Leu	Leu	Arg	Val	Trp	Gly	Arg	Ile	Ala	Ala	Val	Met	Ala	Asp
	1170					1175					1180				
Val	Ser	Ser	Ser	Ser	Tyr	Leu	Gln	Ile	Val	Arg	Leu	Lys	Thr	Lys	Asp
1185					1190					1195				1200	
Arg	Lys	Lys	Gln	Val	Gly	Ile	Lys	Ile	Pro	Glu	Gly	Cys	Val	Arg	Arg
			1205						1210				1215		
Val	Leu	Gln	Glu	Leu	Arg	Leu	Met	Asp	Ala	Asp	Val	Lys	Arg	Arg	Gln
		1220					1225					1230			
Ala	Pro	Ala	Leu	Gly	Cys	Pro	Ala	Pro	Pro	Ala	Pro	Arg	Pro	Leu	Ala
	1235						1240				1245				
Leu	Pro	Cys	Gly	Pro	Gly	Glu	Val	Leu	Asp	Leu	Thr	Tyr	Ser	Pro	Pro
	1250					1255					1260				
Ala	Glu	Ala	Phe	Pro	Pro	Pro	His	Phe	Ser	Phe	Pro	Ala	Pro	Leu	
1265					1270				1275					1280	
Ser	Leu	Asp	Ala	Gly	Pro	Gly	Val	Val	Pro	Leu	Gly	Thr	Pro	Asp	Ala
			1285					1290					1295		
Gln	Ala	Asp	Pro	Ala	Ala	Leu	Ala	His	Gln	Gly	Cys	Asp	Ile	Asn	Phe
	1300						1305					1310			
Lys	Glu	Val	Leu	Glu	Asp	Met	Leu	Arg	Ser	Leu	His	Ala	Gly	Pro	Pro
	1315						1320				1325				
Ser	Glu	Gly	Ala	Leu	Gly	Glu	Gly	Ala	Gly	Ala	Gly	Gly	Ala	Ala	Gly
	1330					1335				1340					
Gly	Gly	Pro	Glu	Arg	Gln	Ser	Val	Ile	Gln	Phe	Ser	Pro	Pro	Phe	Pro
1345					1350				1355					1360	
Gly	Ala	Gln	Ala	Pro	Leu										
			1365												

<210> 3107
<211> 2102
<212> DNA
<213> Homo sapiens

<400> 3107
atgctgcagg agtggctggc ggctgtgggc gatgactatg ctgctgtggt ctggaggcct
60
gagggcgagc ccaggttcta cccagatgaa gaggggccca agcactggac caaagaaagg
120
caccagtttc tgatggagct gaagcaggaa gccctcacct ttgccaggaa ctgggggggcc
180
gactatatcc tgtttgcaga cacagacaac attctgacca acaatcagac tctgcggctt
240
ctcatggggc aggggcttcc agtgggtggc ccaatgctgg actcccagac ctactactcc
300
aacttctggt gtgggatcac cccccagggc tactaccgcc gcacagccga gtacttcccc
360
accaagaacc gccagcgccg gggctgcttc cgtgtcccca tggteccact caccttccct
420
gcatccctgc gggctgaagg ggcagaccag cttgctttct acccgccaca tcccaactac
480
acttggcctt tcgacgacat catcgtcttc gcctatgcct gccaggctgc tggggctctcc
540
gtccacgtgt gcaatgagca ccgttatggg tacatgaatg tgccggtgaa atcccaccag
600
gggctggaag acgagagggg caacttcac cactgatct tagaagcact agtggacggc
660
ccccgcatgc aggcctcagc tcatgtgact cggccctcta agaggcccag caagataggg
720
tttgacgagg tctttgtcat cagcctggct cgcaggcctg accgtcggga acgcatgctc
780
gcctcgctct gggagatgga gatctctggg aggggtgggt acgctgtgga tggctggatg
840
ctcaacagca gtgccatcag gaacctcggc gtagacctgc tcccgggcta ccaggacctt
900
tactcgggcc gcactctgac caagggcgag gtgggctgct tcctcagcca ttactccatc
960
tgggaagagg tggttgccag gggcctggcc cgggtcctgg tgtttgagga tgacgtgcgc
1020
tttgagagca acttcagggg gcggctggag cggctgatgg aggatgtgga ggcagagaaa
1080
ctgtcttggg acctgatcta cctcggacgg aagcaggtga accctgagaa ggagacggcc
1140
gtggaggggc tgccgggctt ggtgggtggc gggtaactct actggacgct ggcctatgac
1200
ctgcgtctgg cgggtgcccc caagctgctg gcctcacagc ctctgcgccg catgctgccc
1260
gtggacgagt tcctgccccat catgttcgac cagcaccaca acgagcagta caaggcacac
1320
ttctggccac gggacctggt ggccttctcc gccagcccc tgctcgctgc cctaccac
1380
tatgccgggg acgccgagt gctcagtgc acggagacat cctctccatg ggatgatgac
1440

agcggccgcc tcacagctg gagcggctcc caaaagaccc tgcgcagccc ccgcctggac
 1500
 ctgactggca gcagcgggca cagcctccaa cccagcccc gagatgagct ctaggtccag
 1560
 gtgatgactg caaagcagtg tccaggagca ggccactact gcccagagag cagaggagga
 1620
 ggttggtggc agggactgca gacccgtgca gacctggcca ccaccttggg catggccact
 1680
 ctgcccctctg gacctgtctt tcacggggag aaaccactca gagatggatc ccattcccta
 1740
 aaggtctcac agcaaaggag caggactccc aggccctgt accctgacctg gcctgattca
 1800
 gggccttgtg gccccagct tctgtttcaa gctgggcaga cccaggaac cttccctcc
 1860
 ctaaggactc agctgagggg cccctctgcc cccttctacc tccacctcag caccctcccc
 1920
 cagcttgatg tttgggtctc cccagcacc tcctccctgg ccggtgcaaa gtacagggag
 1980
 gtaaagcagg acccttgcag acatgttgcc cagcacacag taggcccctca ataaaagcca
 2040
 tttgcacttt aaatatatat atgtatgtat atatatgtat atatatatat atatatatat
 2100
 gt
 2102

<210> 3108

<211> 517

<212> PRT

<213> Homo sapiens

<400> 3108

Met	Leu	Gln	Glu	Trp	Leu	Ala	Ala	Val	Gly	Asp	Asp	Tyr	Ala	Ala	Val
1				5					10					15	
Val	Trp	Arg	Pro	Glu	Gly	Glu	Pro	Arg	Phe	Tyr	Pro	Asp	Glu	Glu	Gly
			20					25					30		
Pro	Lys	His	Trp	Thr	Lys	Glu	Arg	His	Gln	Phe	Leu	Met	Glu	Leu	Lys
		35					40					45			
Gln	Glu	Ala	Leu	Thr	Phe	Ala	Arg	Asn	Trp	Gly	Ala	Asp	Tyr	Ile	Leu
	50					55					60				
Phe	Ala	Asp	Thr	Asp	Asn	Ile	Leu	Thr	Asn	Asn	Gln	Thr	Leu	Arg	Leu
65					70					75				80	
Leu	Met	Gly	Gln	Gly	Leu	Pro	Val	Val	Ala	Pro	Met	Leu	Asp	Ser	Gln
				85					90					95	
Thr	Tyr	Tyr	Ser	Asn	Phe	Trp	Cys	Gly	Ile	Thr	Pro	Gln	Gly	Tyr	Tyr
			100					105					110		
Arg	Arg	Thr	Ala	Glu	Tyr	Phe	Pro	Thr	Lys	Asn	Arg	Gln	Arg	Arg	Gly
		115					120					125			
Cys	Phe	Arg	Val	Pro	Met	Val	His	Ser	Thr	Phe	Leu	Ala	Ser	Leu	Arg
	130					135					140				
Ala	Glu	Gly	Ala	Asp	Gln	Leu	Ala	Phe	Tyr	Pro	Pro	His	Pro	Asn	Tyr
145					150				155					160	
Thr	Trp	Pro	Phe	Asp	Asp	Ile	Ile	Val	Phe	Ala	Tyr	Ala	Cys	Gln	Ala
				165				170						175	
Ala	Gly	Val	Ser	Val	His	Val	Cys	Asn	Glu	His	Arg	Tyr	Gly	Tyr	Met

```

      180              185              190
Asn Val Pro Val Lys Ser His Gln Gly Leu Glu Asp Glu Arg Val Asn
      195              200              205
Phe Ile His Leu Ile Leu Glu Ala Leu Val Asp Gly Pro Arg Met Gln
      210              215              220
Ala Ser Ala His Val Thr Arg Pro Ser Lys Arg Pro Ser Lys Ile Gly
      225              230              235              240
Phe Asp Glu Val Phe Val Ile Ser Leu Ala Arg Arg Pro Asp Arg Arg
      245              250              255
Glu Arg Met Leu Ala Ser Leu Trp Glu Met Glu Ile Ser Gly Arg Val
      260              265              270
Val Asp Ala Val Asp Gly Trp Met Leu Asn Ser Ser Ala Ile Arg Asn
      275              280              285
Leu Gly Val Asp Leu Leu Pro Gly Tyr Gln Asp Pro Tyr Ser Gly Arg
      290              295              300
Thr Leu Thr Lys Gly Glu Val Gly Cys Phe Leu Ser His Tyr Ser Ile
      305              310              315              320
Trp Glu Glu Val Val Ala Arg Gly Leu Ala Arg Val Leu Val Phe Glu
      325              330              335
Asp Asp Val Arg Phe Glu Ser Asn Phe Arg Gly Arg Leu Glu Arg Leu
      340              345              350
Met Glu Asp Val Glu Ala Glu Lys Leu Ser Trp Asp Leu Ile Tyr Leu
      355              360              365
Gly Arg Lys Gln Val Asn Pro Glu Lys Glu Thr Ala Val Glu Gly Leu
      370              375              380
Pro Gly Leu Val Val Ala Gly Tyr Ser Tyr Trp Thr Leu Ala Tyr Ala
      385              390              395              400
Leu Arg Leu Ala Gly Ala Arg Lys Leu Leu Ala Ser Gln Pro Leu Arg
      405              410              415
Arg Met Leu Pro Val Asp Glu Phe Leu Pro Ile Met Phe Asp Gln His
      420              425              430
Pro Asn Glu Gln Tyr Lys Ala His Phe Trp Pro Arg Asp Leu Val Ala
      435              440              445
Phe Ser Ala Gln Pro Leu Leu Ala Ala Pro Thr His Tyr Ala Gly Asp
      450              455              460
Ala Glu Trp Leu Ser Asp Thr Glu Thr Ser Ser Pro Trp Asp Asp Asp
      465              470              475              480
Ser Gly Arg Leu Ile Ser Trp Ser Gly Ser Gln Lys Thr Leu Arg Ser
      485              490              495
Pro Arg Leu Asp Leu Thr Gly Ser Ser Gly His Ser Leu Gln Pro Gln
      500              505              510
Pro Arg Asp Glu Leu
      515

```

<210> 3109

<211> 959

<212> DNA

<213> Homo sapiens

<400> 3109

```

nnacgcgtcc ttttcaccaa gtctcctgaa cacacaaccg ggtgccactg gaagtgatcc
60
gcagcgcacc tgccctttgt taatacaaca tcaccttgct ccatatccta ccaaagatcc
120

```


cctggaatct ggaaggatct acttcactcg atccctccac agtcagcagg acaactttat
 180
 tccagtctgg gggacgcctt acccgagga gctgccaatc actgcagacg aagatgctca
 240
 cgtaatcttt gcagtcgcgc cgttctgccg gcgccatgta gcggccgtcc ctggtgaagg
 300
 tgattccctg cagactcgct cttcatcctg tgcgccatgt acaagcgagg gctggtgcag
 360
 gtctggtctt tagagcagcc cgaatggcac tgcaaaatag acgagggctc agccgggctg
 420
 gtggcctcgt gctggagccc ggacggggcg cacattctca acaccacgga attccatctg
 480
 cggataaccg tctggtcctt gtgcacaaaa tccgtgtctt acatcaaata cccgaaagct
 540
 tgtctgcagg gaatcacctt caccagggac ggccgctaca tggcgctggc agaacggcg
 600
 gactgcaaag attacgtgag catcttcgtc tgcagtgatt ggcagctcct gcggcatttt
 660
 gatacggaca cccaggatct cacagggatt gagtggggccc caaacggctg tgtgctggca
 720
 gtgtgggaca cctgcttgga gtacaagatt ctgctgtact cattggatgg ccggttggtg
 780
 tccacgtaca gcgctntacg agtggctcnn ctgggcatca agtctgtggc ctggagcccc
 840
 agcagtcagt tcctggcagt tgggagctat gatggaaagg tgcgcatcct taatcacgtg
 900
 acttggaata tgatcacgga gtttgggcat ccctgcagcc ccataaatga ttcccaaaa
 959

<210> 3110

<211> 207

<212> PRT

<213> Homo sapiens

<400> 3110

Met	Tyr	Lys	Arg	Gly	Leu	Val	Gln	Val	Trp	Ser	Leu	Glu	Gln	Pro	Glu
1				5					10					15	
Trp	His	Cys	Lys	Ile	Asp	Glu	Gly	Ser	Ala	Gly	Leu	Val	Ala	Ser	Cys
			20					25					30		
Trp	Ser	Pro	Asp	Gly	Arg	His	Ile	Leu	Asn	Thr	Thr	Glu	Phe	His	Leu
		35					40					45			
Arg	Ile	Thr	Val	Trp	Ser	Leu	Cys	Thr	Lys	Ser	Val	Ser	Tyr	Ile	Lys
	50					55					60				
Tyr	Pro	Lys	Ala	Cys	Leu	Gln	Gly	Ile	Thr	Phe	Thr	Arg	Asp	Gly	Arg
65					70				75					80	
Tyr	Met	Ala	Leu	Ala	Glu	Arg	Arg	Asp	Cys	Lys	Asp	Tyr	Val	Ser	Ile
				85				90					95		
Phe	Val	Cys	Ser	Asp	Trp	Gln	Leu	Leu	Arg	His	Phe	Asp	Thr	Asp	Thr
			100					105					110		
Gln	Asp	Leu	Thr	Gly	Ile	Glu	Trp	Ala	Pro	Asn	Gly	Cys	Val	Leu	Ala
		115					120					125			
Val	Trp	Asp	Thr	Cys	Leu	Glu	Tyr	Lys	Ile	Leu	Leu	Tyr	Ser	Leu	Asp
	130					135					140				
Gly	Arg	Leu	Leu	Ser	Thr	Tyr	Ser	Ala	Xaa	Arg	Val	Val	Xaa	Leu	Gly

145		150		155		160									
Ile	Lys	Ser	Val	Ala	Trp	Ser	Pro	Ser	Ser	Gln	Phe	Leu	Ala	Val	Gly
		165				170						175			
Ser	Tyr	Asp	Gly	Lys	Val	Arg	Ile	Leu	Asn	His	Val	Thr	Trp	Lys	Met
		180						185					190		
Ile	Thr	Glu	Phe	Gly	His	Pro	Cys	Ser	Pro	Ile	Asn	Asp	Ser	Gln	
	195						200						205		

<210> 3111

<211> 1269

<212> DNA

<213> Homo sapiens

<400> 3111

```

tttttttttt tttttttttt tttttttttt tttttcttta acaaaatttt tatttaataa
60
atgggttaaaa tcgcagtgcc aaaaatacat tgacatttag caatttcact gaaaggaaga
120
aactacagaa tgcacgggtt cagaaagcta ttttaagtta ttacaaata aagtatctaa
180
aactcaaaaa caggctctgt atgctatata tagtttatcc cttcccgaac aaaatttctg
240
ttatttgggc aaattcttaa accatgggtt aaaccgtaat gggtacaaac cacaacaca
300
tccatccaga gactgaaacc gtttctatcc ggtcagtggc aaaactgttg aaagggcaat
360
agttgaagct gttgggtttt atatagtgtg aactctgata aatattccta ccaggactaa
420
aacacagcac gctttgcggg catggetgac tcacaaaggt tgtaacaaac aagaactact
480
cttcactcga caccatggct cagaggccac cgagaagcac gagtgaactga cagctcctct
540
gcttacaac gaatgaaacc caaagtggat gtcgttctca cagcactgaa agtgcttcag
600
gactcacact gatccaatac taactttctt ccctatttta cacatatttt tctactgtcc
660
agtggaaatc attttctgtt ttggctaaac aacaaatact agtttataac aggaatggta
720
aaatctgtga gaattctgct caatttaata caagatcact actttcttta gaatggtttc
780
tgcggttttc tacgtcacc tctgtatttt tagcttcag ttcctggta aggaataagt
840
tctccttccc agtcacactc ggggtcattt acacgtttct gggatgccct tgctcgtcca
900
tggaggccag gtgcgtgcag tgactcactc tgcctcttcc ctcttctcag gaccagtccc
960
cgaaccttct gccttgcaga tctcccgt tccgccacac tctcgcgtc ggaagcgagc
1020
tcttgatca tacagctgca aggctggccg gtccttgttt gccagtgcct cttttctggg
1080
tgctggactg tcgtcacacc tetgcgtct tccagtctc tccatggcct cccccggagc
1140
cccgtgtcc tggctcccct tcttccctct gtcttggcca ggtcctttcc cccatctctg
1200

```

ctcattctca ctccttctgg aaagccgttc aggctcgtgg tgagctctgt gcctcctgcc
 1260
 gtcattccac
 1269

<210> 3112
 <211> 151
 <212> PRT
 <213> Homo sapiens

<400> 3112
 Met Thr Ala Gly Gly Thr Glu Leu Thr Thr Ser Leu Asn Gly Phe Pro
 1 5 10 15
 Glu Gly Val Arg Met Ser Arg Asp Gly Gly Lys Asp Leu Ala Lys Thr
 20 25 30
 Glu Gly Arg Arg Gly Ala Arg Thr Ala Gly Leu Arg Gly Arg Pro Trp
 35 40 45
 Arg Asp Trp Glu Glu Arg Arg Gly Val Thr Thr Val Gln His Pro Glu
 50 55 60
 Lys Ser Asp Trp Gln Thr Arg Thr Gly Gln Pro Cys Ser Cys Met Ile
 65 70 75 80
 Gln Glu Leu Ala Ser Glu Arg Glu Ser Val Ala Glu Ala Gly Gly Ser
 85 90 95
 Ala Arg Gln Lys Val Arg Gly Leu Val Leu Arg Arg Gly Lys Arg Gln
 100 105 110
 Ser Glu Ser Leu His Ala Pro Gly Leu His Gly Arg Ala Arg Ala Ser
 115 120 125
 Gln Lys Arg Val Asn Asp Pro Glu Cys Asp Trp Glu Gly Glu Leu Ile
 130 135 140
 Pro Tyr Gln Glu Thr Gly Ser
 145 150

<210> 3113
 <211> 631
 <212> DNA
 <213> Homo sapiens

<400> 3113
 nacgcgttcc tgcagaacgc ctcagccgtg gtcattctca acgtgggctc caacaccaac
 60
 gagaccatca ccatgcccc a cgcgggtgta gaagacatcg tggccataat gattcctgag
 120
 ccaaaagggga aggagatagt aagcctgctg gaaagaaaca tcaccgtgac aatgtacatc
 180
 accatcgga cccggaactt gcagaaatat gtgagccgca cttcggttgt gtttgtctcc
 240
 atctccttca ttgtcctgat gatcatttcc ctgcgatggc tcgtctttta ttacatccag
 300
 aggtttcgat atgcaaatgc cagggatagg aaccagcgcc gactggggga tgcagcaaag
 360
 aaagccatca gcaaactcca gatcaggacc atcaagaagg gtgacaagga aacagagtct
 420
 gattttgaca actgtgcagt ttgtattgaa ggggtacaagc ccaatgacgt tgtccggatc
 480

ctgccctgcc ggcatctttt ccacaagtcc tgtgttgacc cctggcttct agaccatcgt
 540
 acctgtccca tgtgcaagat gaacattctt aaagccctag ggatcccccc caatgccgac
 600
 tgcattggacg actttgccac tgacttcgag g
 631

<210> 3114
 <211> 210
 <212> PRT
 <213> Homo sapiens

<400> 3114
 Xaa Ala Phe Leu Gln Asn Ala Ser Ala Val Val Ile Phe Asn Val Gly
 1 5 10 15
 Ser Asn Thr Asn Glu Thr Ile Thr Met Pro His Ala Gly Val Glu Asp
 20 25 30
 Ile Val Ala Ile Met Ile Pro Glu Pro Lys Gly Lys Glu Ile Val Ser
 35 40 45
 Leu Leu Glu Arg Asn Ile Thr Val Thr Met Tyr Ile Thr Ile Gly Thr
 50 55 60
 Arg Asn Leu Gln Lys Tyr Val Ser Arg Thr Ser Val Val Phe Val Ser
 65 70 75 80
 Ile Ser Phe Ile Val Leu Met Ile Ile Ser Leu Ala Trp Leu Val Phe
 85 90 95
 Tyr Tyr Ile Gln Arg Phe Arg Tyr Ala Asn Ala Arg Asp Arg Asn Gln
 100 105 110
 Arg Arg Leu Gly Asp Ala Ala Lys Lys Ala Ile Ser Lys Leu Gln Ile
 115 120 125
 Arg Thr Ile Lys Lys Gly Asp Lys Glu Thr Glu Ser Asp Phe Asp Asn
 130 135 140
 Cys Ala Val Cys Ile Glu Gly Tyr Lys Pro Asn Asp Val Val Arg Ile
 145 150 155 160
 Leu Pro Cys Arg His Leu Phe His Lys Ser Cys Val Asp Pro Trp Leu
 165 170 175
 Leu Asp His Arg Thr Cys Pro Met Cys Lys Met Asn Ile Leu Lys Ala
 180 185 190
 Leu Gly Ile Pro Pro Asn Ala Asp Cys Met Asp Asp Phe Ala Thr Asp
 195 200 205
 Phe Glu
 210

<210> 3115
 <211> 1366
 <212> DNA
 <213> Homo sapiens

<400> 3115
 ncacaaaggc accaaaccac aaaacgtcac acgtaaacad catacgtggc aaccacaagc
 60
 caatcagttg gatatttcat tcattggtat acatatggac tgtaagggtgt ctttcagggtt
 120
 gcagaaaaga tggaaaaaag gacatgtgca ctctgcccc aagatgtcga atataatgtc
 180

ctatactttg cacaatcaga gaatatagct gctcatgaga attgtttgct gtattcttca
 240
 ggactttgtg aatgtgagga tcaggatcca cttaatcctg atagaagttt tgatgtggaa
 300
 tcagtaaaga aagaaatcca gagaggaagg aagttgaaat gcaaattttg tcataaaaga
 360
 ggagccaccg tgggatgtga tttaaaaaac tgtaacaaga attaccactt tttctgtgcc
 420
 aagaaggacg acgcagttcc acagtctgat ggagttcgag gaatttataa actgctttgc
 480
 cagcaacatg ctcaattccc gatcatcgct caaagtggta aattttcagg agtgaaaaga
 540
 aaaagaggaa ggaagaaacc cctctcaggc aatcatgtac agccaccga aacaatgaaa
 600
 tgtaatacat tcataagaca agtgaaagaa gagcatggca gacacacaga tgcaactgtg
 660
 aaagttcctt ttcttaagaa atgcaagnga agcaggactt cttaattact tacttgaaga
 720
 aatattagac aaagttcatt caattccaga aaaactcatg gatgagacta cttcagaatc
 780
 agactatgaa gaaatcgga gtgcactttt tgactgtaga ttgttcgaag acacatttgt
 840
 aaattttcaa gcagcaatag agaaaaaaat tcatgcatct caacaaaggt ggcagcagtt
 900
 gaaggaagag attgagctac ttcaggactt aaaacaaacc ttgtgctctt ttcaagaaaa
 960
 tagagatctt atgtcaagtt ctacatcaat atcatccctg tcttattagg gattaccgtt
 1020
 tcctaagcca agagtcatgt caaattgcaa tcaggctcaa aaccagagac caggctgtga
 1080
 aatccacaca tctttagaac tagtcgtctc ctcttggcct cagcagctct tcctgttct
 1140
 tactggttga cattttgatc actctttgca cactcttggtg ttttttgctc actgtcacat
 1200
 tcccagcacc tagtatgctc agtaaatggt tgtggaataa gtgcataaaa tgttcttaac
 1260
 ctttgattct acttacagcc catgatagcc tcttcttaga tataataaat ttggattata
 1320
 ctaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa
 1366

<210> 3116

<211> 191

<212> PRT

<213> Homo sapiens

<400> 3116

Met	Glu	Lys	Arg	Thr	Cys	Ala	Leu	Cys	Pro	Lys	Asp	Val	Glu	Tyr	Asn
1				5				10					15		
Val	Leu	Tyr	Phe	Ala	Gln	Ser	Glu	Asn	Ile	Ala	Ala	His	Glu	Asn	Cys
			20					25					30		
Leu	Leu	Tyr	Ser	Ser	Gly	Leu	Val	Glu	Cys	Glu	Asp	Gln	Asp	Pro	Leu
		35					40				45				
Asn	Pro	Asp	Arg	Ser	Phe	Asp	Val	Glu	Ser	Val	Lys	Lys	Glu	Ile	Gln

50		55		60
Arg Gly Arg Lys Leu Lys Cys Lys Phe Cys His Lys Arg Gly Ala Thr				
65		70		75
Val Gly Cys Asp Leu Lys Asn Cys Asn Lys Asn Tyr His Phe Phe Cys				
	85		90	95
Ala Lys Lys Asp Asp Ala Val Pro Gln Ser Asp Gly Val Arg Gly Ile				
	100		105	110
Tyr Lys Leu Leu Cys Gln Gln His Ala Gln Phe Pro Ile Ile Ala Gln				
	115		120	125
Ser Gly Lys Phe Ser Gly Val Lys Arg Lys Arg Gly Arg Lys Lys Pro				
	130		135	140
Leu Ser Gly Asn His Val Gln Pro Pro Glu Thr Met Lys Cys Asn Thr				
	145		150	155
Phe Ile Arg Gln Val Lys Glu Glu His Gly Arg His Thr Asp Ala Thr				
	165		170	175
Val Lys Val Pro Phe Leu Lys Lys Cys Lys Xaa Ser Arg Thr Ser				
	180		185	190

<210> 3117
 <211> 1373
 <212> DNA
 <213> Homo sapiens

<400> 3117
 nnaaccacaga agcaaaagag cagagctacc atgtcctctt ggagcagaca gcgacacaaa
 60
 agcccagggg gcattcaacc ccatgtttct agaactctgt tcctgctgct gctgttggca
 120
 gcctcagcct ggggggtcac cctgagcccc aaagactgcc aggtgttccg ctcagaccat
 180
 ggcagctcca tctcctgtca accacctgcc gaaatccccg gctacctgcc agccgacacc
 240
 gtgcacctgg ccgtggaatt cttcaacctg acccacctgc cagccaacct cctccagggc
 300
 gcctctaagc tccaagaatt gcacctctcc agcaatgggc tggaaagcct ctcgcccga
 360
 ttctgcggc cagtgccgca gctgaggggt ctggatctaa cccgaaacgc cctgaccggg
 420
 ctgccccggg gcctcttcca ggcctcagcc accctggaca ccctggtatt gaaagaaaac
 480
 cagctggagg tcctggaggt ctctgggcta cacggcctga aagctctggg gcatctggac
 540
 ctgtctggga accgcctccg gaaactgcc cccgggctgc tggccaactt caccctcctg
 600
 cgcacccttg accttgggga gaaccagttg gagaccttgc cacctgacct cctgaggggt
 660
 ccgctgcaat tagaacggct acatctagaa ggcaacaaat tgcaagtact gggaaaagat
 720
 ctctcttgc cgcagccgga cctgcgctac ctcttctga gcggcaacaa gctggccagg
 780
 gtggcagccg gtgccttcca gggcctgagg cagctggaca tgctggacct ctccaataac
 840
 tcaactggca gcgtgcccga ggggctctgg gcctccctag ggcagccaaa ctgggacatg
 900

cgggatggct tcgacatctc cggcaacccc tggatctgtg accagaacct gagcgacctc
 960
 tatcgttggc ttcaggccca aaaagacaag atgttttccc agaatgacac gcgctgtgct
 1020
 gggcctgaag ccgtgaaggg ccagacgctc ctggcagtgg ccaagtccca gtgagaccag
 1080
 gggcttgggt tgaggggtggg gggctctggta gaacactgca acccgcttaa caaataatcc
 1140
 tgcctttggc cgggtgctggg ggctcaagcc tgtaatccca gcactttggg gagggccagg
 1200
 tggcggaaac acgaggtcag gagatcgaga ccatcttggc taacatgggt aaaccctgtc
 1260
 tctactaaaa atataaaaaa ttagccaggc gtggtggtgg gcacctgtag tcccagcaac
 1320
 tcgggagggt gaggcaggag aatggcgtga acttgggagg cggagcttgc ggt
 1373

<210> 3118

<211> 312

<212> PRT

<213> Homo sapiens

<400> 3118

Val	Thr	Leu	Ser	Pro	Lys	Asp	Cys	Gln	Val	Phe	Arg	Ser	Asp	His	Gly
1				5					10					15	
Ser	Ser	Ile	Ser	Cys	Gln	Pro	Pro	Ala	Glu	Ile	Pro	Gly	Tyr	Leu	Pro
			20					25					30		
Ala	Asp	Thr	Val	His	Leu	Ala	Val	Glu	Phe	Phe	Asn	Leu	Thr	His	Leu
		35					40					45			
Pro	Ala	Asn	Leu	Leu	Gln	Gly	Ala	Ser	Lys	Leu	Gln	Glu	Leu	His	Leu
		50				55					60				
Ser	Ser	Asn	Gly	Leu	Glu	Ser	Leu	Ser	Pro	Glu	Phe	Leu	Arg	Pro	Val
65					70					75				80	
Pro	Gln	Leu	Arg	Val	Leu	Asp	Leu	Thr	Arg	Asn	Ala	Leu	Thr	Gly	Leu
			85						90					95	
Pro	Pro	Gly	Leu	Phe	Gln	Ala	Ser	Ala	Thr	Leu	Asp	Thr	Leu	Val	Leu
		100						105					110		
Lys	Glu	Asn	Gln	Leu	Glu	Val	Leu	Glu	Val	Ser	Trp	Leu	His	Gly	Leu
		115				120						125			
Lys	Ala	Leu	Gly	His	Leu	Asp	Leu	Ser	Gly	Asn	Arg	Leu	Arg	Lys	Leu
		130				135					140				
Pro	Pro	Gly	Leu	Leu	Ala	Asn	Phe	Thr	Leu	Leu	Arg	Thr	Leu	Asp	Leu
145					150					155				160	
Gly	Glu	Asn	Gln	Leu	Glu	Thr	Leu	Pro	Pro	Asp	Leu	Leu	Arg	Gly	Pro
			165						170					175	
Leu	Gln	Leu	Glu	Arg	Leu	His	Leu	Glu	Gly	Asn	Lys	Leu	Gln	Val	Leu
			180					185					190		
Gly	Lys	Asp	Leu	Leu	Leu	Pro	Gln	Pro	Asp	Leu	Arg	Tyr	Leu	Phe	Leu
		195				200						205			
Ser	Gly	Asn	Lys	Leu	Ala	Arg	Val	Ala	Ala	Gly	Ala	Phe	Gln	Gly	Leu
		210				215					220				
Arg	Gln	Leu	Asp	Met	Leu	Asp	Leu	Ser	Asn	Asn	Ser	Leu	Ala	Ser	Val
225					230					235				240	
Pro	Glu	Gly	Leu	Trp	Ala	Ser	Leu	Gly	Gln	Pro	Asn	Trp	Asp	Met	Arg

	115		120		125
Leu	Asn	Tyr	Thr	Ala	Tyr
		Tyr	Tyr	Pro	Ser
			Pro	Glu	Asp
				Asn	Ala
	130		135		140

<210> 3121
 <211> 284
 <212> DNA
 <213> Homo sapiens

<400> 3121
 gaattccatg gcagctggga catctgtgag ccacgtgggt tcttgggcag caccaggacc
 60
 atctgaggat ttctcaactt ctgcagcaac ttctgcagcc agctcacacg tgaggagaaa
 120
 taagaggaac atgaacctgg acggggcagc ttccattgtc cctctcctgc tcttgctaat
 180
 gaacaaggcc tccccagagt atgaagagaa catgcacaga taccagaagg cagccaagct
 240
 cttccgggga agattctctt tattctgggtg gacagtggta tgaa
 284

<210> 3122
 <211> 91
 <212> PRT
 <213> Homo sapiens

<400> 3122
 Met Ala Ala Gly Thr Ser Val Ser His Val Gly Ser Trp Ala Ala Pro
 1 5 10 15
 Gly Pro Ser Glu Asp Phe Ser Thr Ser Ala Ala Thr Ser Ala Ala Ser
 20 25 30
 Ser His Val Arg Arg Asn Lys Arg Asn Met Asn Leu Asp Gly Ala Ala
 35 40 45
 Ser Ile Val Pro Leu Leu Leu Leu Leu Met Asn Lys Ala Ser Pro Glu
 50 55 60
 Tyr Glu Glu Asn Met His Arg Tyr Gln Lys Ala Ala Lys Leu Phe Arg
 65 70 75 80
 Gly Arg Phe Ser Leu Phe Trp Trp Thr Val Val
 85 90

<210> 3123
 <211> 344
 <212> DNA
 <213> Homo sapiens

<400> 3123
 aagaaagtga actgcaagcc caagaaccag gacgaacagg agattccttt ccggctccgg
 60
 gagattatga ggagccgccca agagatgaaa aaccgatca gtaacaagaa gaggaagaaa
 120
 gcagcccagg tgaccttcag aaagacattg gagaaggaag caaagggaga ggagcccagc
 180
 atcgagtc ccaagttcaa acagaggaag ggggagtcac acggggccta tatccaccgc
 240

atgcagcaag aggccagca tgtgctgttc ctcagcaaga accaggccat ccggcagcca
 300
 gaggtgcagg cagctcccaa ggagaagtct gagcagaaaa aagc
 344

<210> 3124
 <211> 92
 <212> PRT
 <213> Homo sapiens

<400> 3124
 Met Arg Ser Arg Gln Glu Met Lys Asn Pro Ile Ser Asn Lys Lys Arg
 1 5 10 15
 Lys Lys Ala Ala Gln Val Thr Phe Arg Lys Thr Leu Glu Lys Glu Ala
 20 25 30
 Lys Gly Glu Glu Pro Asp Ile Ala Val Pro Lys Phe Lys Gln Arg Lys
 35 40 45
 Gly Glu Ser Asp Gly Ala Tyr Ile His Arg Met Gln Gln Glu Ala Gln
 50 55 60
 His Val Leu Phe Leu Ser Lys Asn Gln Ala Ile Arg Gln Pro Glu Val
 65 70 75 80
 Gln Ala Ala Pro Lys Glu Lys Ser Glu Gln Lys Lys
 85 90

<210> 3125
 <211> 647
 <212> DNA
 <213> Homo sapiens

<400> 3125
 agatggagtt ttgctcttcg tgcccaggct ggagtaccat ggtgacagtg cgaagctaag
 60
 acattaggaa ggtgctgagg aaagccatta agcatccaca gctccactgc ctaggcagat
 120
 ggtcagcagg cagtttagtt gtgggagtat ttccaatttg catgaatgaa acatggacaa
 180
 ataagataag gctggctcca gggaagtaat tccccagtt cccctgagcc ttggatctgg
 240
 aaaactgcag cccatcctgg aattagggaa catcacaaaa cgtactgggg agaactcccc
 300
 atgtggcctc ggcccacgcc agaagccggg caaggtccca agtgccggct cgcccacaag
 360
 ctatggctaa gacagaaaaa caaaggaaaa aaagtcctcc ccaaacacac acataagcaa
 420
 aaccatctt cctgtgttct ctgccaagag agctggagca aaagagatga gtttgagact
 480
 ctgattcatc catcaagaca aataaactca gtctatggag gttagcaggg caatttgtga
 540
 agcaaacaaa agttgagttt tggaaagggg ctctgaagaa aatgaagatg acataaccagg
 600
 aatttaactt catgacaaga agagaaagtg actcactctt gacgcgt
 647

<210> 3126

<211> 116
 <212> PRT
 <213> Homo sapiens

<400> 3126

Met	Lys	Leu	Asn	Ser	Trp	Tyr	Val	Ile	Phe	Ile	Phe	Phe	Arg	Ala	Pro
1				5				10					15		
Phe	Gln	Asn	Ser	Thr	Phe	Val	Cys	Phe	Thr	Asn	Cys	Pro	Ala	Asn	Leu
		20					25					30			
His	Arg	Leu	Ser	Leu	Phe	Val	Leu	Met	Asp	Glu	Ser	Glu	Ser	Gln	Thr
	35					40					45				
His	Leu	Phe	Cys	Ser	Ser	Ser	Leu	Gly	Arg	Glu	His	Arg	Lys	Met	Gly
50					55			60							
Phe	Ala	Tyr	Val	Cys	Val	Trp	Gly	Gly	Leu	Phe	Phe	Leu	Cys	Phe	Ser
65				70				75						80	
Val	Leu	Ala	Ile	Ala	Cys	Gly	Arg	Ala	Gly	Thr	Trp	Asp	Leu	Ala	Arg
			85			90							95		
Leu	Leu	Ala	Trp	Ala	Glu	Ala	Thr	Trp	Gly	Val	Leu	Pro	Ser	Thr	Phe
		100				105						110			
Cys	Asp	Val	Pro												
		115													

<210> 3127
 <211> 2218
 <212> DNA
 <213> Homo sapiens

<400> 3127

```

ncagaagtta gccaaagatga acttaatgaa atcaatcagt tcttgggacc cgtggaaaaa
60
ttcttctactg aagaggtgga ctcccgaaaa attgaccagg aagggaataat cccagatgaa
120
actttggaga aattgaagag cctagggctt tttgggctgc aagtcccaga agaatatggt
180
ggcctgggct tctccaacac catgtactca agactagggg agatcatcag catggatggg
240
tccatcactg tgaccctggc agcgcaccag gctattggcc tcaaggggat catcttggct
300
ggcactgagg agcagaaagc caaatacttg cctaaactgg cgtccgggga gcacatagca
360
gccttctgcc tcacggagcc agccagtggg agcgatgcag cctcaatccg gagcagagcc
420
acactaagtg aagacaagaa gcactacatc ctcaatggct ccaaggtctg gattactaat
480
ggaggactgg ccaatatattt tactgtgttt gcaaagactg aggtcggtga ttctgatgga
540
tcagtgaag acaagatcac agcattcata gtagaaagag actttggtgg agtcactaat
600
gggaaacccg aagataaatt aggcattcgg ggctccaaca cttgtgaagt ccattttgaa
660
aacaccaaga tacctgtgga aaacatcctt ggagaggtcg gagatggggt taaggtggcc
720
atgaacatcc tcaacagcgg ccggttcagc atgggcagcg tcgtggctgg gctgctcaag
780

```

agattgattg aaatgactgc tgagtacgcc tgcacaagga aacagtttaa caagaggctc
840
agtgaatttg gattgattca ggagaaattt gcactgatgg ctccagaaggc ttacgtcatg
900
gagagtatga cctacctcac agcaggggatg ctggaccaac ctggctttcc cgactgctcc
960
atcgaggcag ccatggtgaa ggtgttcagc tccgaggccg cctggcagtg tgtgagtgag
1020
gcgctgcaga tcctcggggg cttgggctac acaagggact atccgtacga gcgcatactg
1080
cgtgacaccc gcacccctct catcttcgag ggaaccaatg agattctccg gatgtacatc
1140
gccctgacgg gtctgcagca tgccggccgc atcctgacta ccaggatcca tgagcttaaa
1200
caggccaaag tgagcacagt catggatacc gttggccgga ggcttcggga ctccctgggc
1260
cgaactgtgg acctggggct gacaggcaac catggagttg tgcaccccag tcttgccggac
1320
agtgccaaaca agtttgagga gaacacctac tgcttcggcc ggaccgtgga gacactgctg
1380
ctccgctttg gcaagaccat catggaggag cagctggtac tgaagcgggt ggccaacatc
1440
ctcatcaacc tgtatggcat gacggccgtg ctgtcgcggg ccagccgctc catccgcatt
1500
gggctccgca accacgacca cgaggttctc ttggccaaca ccttctgcgt ggaagcttac
1560
ttgcagaatc tcttcagcct ctctcagctg gacaagtatg ctccagaaaa cctagatgag
1620
cagattaaga aagtgtccca gcagatcctt gagaagcgag cctatatctg tgcccaccct
1680
ctggacagga catgctgagg caggggacag tgtcccctgc taccgcccgc ccctacccat
1740
ggcccgttgc tggatgactg ttactctttt ttcagaaggt gttgggatta tcacaggtta
1800
agccttttgt tccccgtctg cacctgaagg gttgtcgctt ggccctgggag agcctcttcc
1860
aggttttgac ctgcaggcag tgctctctaa caggaccatc acagcttctg aactgagccg
1920
gagagagaga atggaattgc tgacccctgg aactggcggg tattctggctc attgaggaga
1980
caccatagtg gaaactgggg cttatgctgc tgcctccagg gtgtgagggtg ggtggggacc
2040
tgtgtcaggt gtggatagcc atttctgctc aaccacacat tctctaagaa acagcttgaa
2100
agctctgtct gggtcattca tttaaactag aagcagaggc acttaaaaaca tgtaccagga
2160
accatttaac aaagaatata aaatgtcaca atctgtgtac tgttaaaaaa aaaaaaaa
2218

<210> 3128

<211> 565

<212> PRT

<213> Homo sapiens

<400> 3128

Xaa Glu Val Ser Gln Asp Glu Leu Asn Glu Ile Asn Gln Phe Leu Gly
 1 5 10 15
 Pro Val Glu Lys Phe Phe Thr Glu Glu Val Asp Ser Arg Lys Ile Asp
 20 25 30
 Gln Glu Gly Lys Ile Pro Asp Glu Thr Leu Glu Lys Leu Lys Ser Leu
 35 40 45
 Gly Leu Phe Gly Leu Gln Val Pro Glu Glu Tyr Gly Gly Leu Gly Phe
 50 55 60
 Ser Asn Thr Met Tyr Ser Arg Leu Gly Glu Ile Ile Ser Met Asp Gly
 65 70 75 80
 Ser Ile Thr Val Thr Leu Ala Ala His Gln Ala Ile Gly Leu Lys Gly
 85 90 95
 Ile Ile Leu Ala Gly Thr Glu Glu Gln Lys Ala Lys Tyr Leu Pro Lys
 100 105 110
 Leu Ala Ser Gly Glu His Ile Ala Ala Phe Cys Leu Thr Glu Pro Ala
 115 120 125
 Ser Gly Ser Asp Ala Ala Ser Ile Arg Ser Arg Ala Thr Leu Ser Glu
 130 135 140
 Asp Lys Lys His Tyr Ile Leu Asn Gly Ser Lys Val Trp Ile Thr Asn
 145 150 155 160
 Gly Gly Leu Ala Asn Ile Phe Thr Val Phe Ala Lys Thr Glu Val Val
 165 170 175
 Asp Ser Asp Gly Ser Val Lys Asp Lys Ile Thr Ala Phe Ile Val Glu
 180 185 190
 Arg Asp Phe Gly Gly Val Thr Asn Gly Lys Pro Glu Asp Lys Leu Gly
 195 200 205
 Ile Arg Gly Ser Asn Thr Cys Glu Val His Phe Glu Asn Thr Lys Ile
 210 215 220
 Pro Val Glu Asn Ile Leu Gly Glu Val Gly Asp Gly Phe Lys Val Ala
 225 230 235 240
 Met Asn Ile Leu Asn Ser Gly Arg Phe Ser Met Gly Ser Val Val Ala
 245 250 255
 Gly Leu Leu Lys Arg Leu Ile Glu Met Thr Ala Glu Tyr Ala Cys Thr
 260 265 270
 Arg Lys Gln Phe Asn Lys Arg Leu Ser Glu Phe Gly Leu Ile Gln Glu
 275 280 285
 Lys Phe Ala Leu Met Ala Gln Lys Ala Tyr Val Met Glu Ser Met Thr
 290 295 300
 Tyr Leu Thr Ala Gly Met Leu Asp Gln Pro Gly Phe Pro Asp Cys Ser
 305 310 315 320
 Ile Glu Ala Ala Met Val Lys Val Phe Ser Ser Glu Ala Ala Trp Gln
 325 330 335
 Cys Val Ser Glu Ala Leu Gln Ile Leu Gly Gly Leu Gly Tyr Thr Arg
 340 345 350
 Asp Tyr Pro Tyr Glu Arg Ile Leu Arg Asp Thr Arg Ile Leu Leu Ile
 355 360 365
 Phe Glu Gly Thr Asn Glu Ile Leu Arg Met Tyr Ile Ala Leu Thr Gly
 370 375 380
 Leu Gln His Ala Gly Arg Ile Leu Thr Thr Arg Ile His Glu Leu Lys
 385 390 395 400
 Gln Ala Lys Val Ser Thr Val Met Asp Thr Val Gly Arg Arg Leu Arg
 405 410 415
 Asp Ser Leu Gly Arg Thr Val Asp Leu Gly Leu Thr Gly Asn His Gly

ntttttttt	tctcctataa	catgattgcc	ttttatttat	tatgcagggt	gttgatttac
60	atagggagtt	ggagatgcta	accaagcatg	gagttttcac	atgggtctatt
120	tcagggactt	ggagacagcc	tttaacttct	ggcaaaaaga	caatttcaca
180	aaaccatcct	ttgggtttttg	atcctgagtc	agagacggac	atgtgcttat
240	agagtttcaa	cccttaggta	accttaaaag	agcaggaact	atgttggtgtg
300	gcagtataca	aacttgatat	taaatgacaa	attggaacaa	tctttctcta
360	tctttcatag	aggcatcaca	gtgagtcctc	taaagccttg	atctagggtgt
420	ggcttacaga	gtatgaatgc	acgataagaa	ggaaattgga	tagggagtga
480	tttaaaagaa	ggaagaagag	aaaacgagat	tttaagacag	gaaatgaagc
540	tgtgtgtgtg	tgtgcggtgtg	tgtgtgtgtg	cgctgtgtgtg	cggtgtgtgtg
600	tgtgtggttg	gcaggcctag	tgatcctgtt	gtttagtgtc	tctgagattt
660	tttttacttt	gcataaagta	gataacttggc	catatgtagt	tccaaggaga
720	ccaccttttg	agtctttcct	tctgattcac	gatttttctt	caacaatttt
780	atccatcaca	aaagtttttg	acatgctcta	cggaacttcc	tgctgtgggc
840					agtgtatccc

actcgtcatc tagagtctgg taaattgcc aagctggcag ttgagactcc tttagtttga
 900
 aaaatgatat caccttccca ttttctttca taccactgtc caccagaata aagagaatct
 960
 tcccctggaa gagcttggct gccttctggt atctgtgcat gttctcttca tactctgggg
 1020
 aggcttgtt cattatcagg aggagatgaa tctgaattac gctgttgaat aaccaatca
 1080
 cagtcacagg gttggagcag gagcaggaga gggacaatgg aagctgcccc gtccagggtc
 1140
 atgttcctct tatttctcct cacgtgtgag ctggctgcag aagttgctgc agaagttgag
 1200
 aaatcctcag atggctctgg tgctgcccag gaaccacgt ggctcacaga tgtcccagct
 1260
 gccatggaat tcattgctgc cactgagggtg gctgtcatag gcttcttcca ggatttagaa
 1320
 ataccagcag tgccatact ccatagcatg gtgcaaaaat tcccaggcgt gtcatttggg
 1380
 atcagcactg attctgaggt tctgacacac tacaacatca ctgggaacac catctgcctc
 1440
 tttcgcttgg tagacaatga acaactgaat ttagaggacg aagacattga aagcattgat
 1500
 gccaccaaat tgagccgttt cattgagatc aacagcctcc acatggtgac agagtacaac
 1560
 cctgtgactg tgattgggtt attcaacagc gtaattcaga ttcctctcct cctgataatg
 1620
 aacaaggcct cccagagta tgaagagaac atgcacagat accagaaggc agccaagctc
 1680
 ttccagggga agattctctt tattctggtg gacagtggta tgaaagaaaa tgggaagggtg
 1740
 atatcatttt tcaaactaaa ggagtctcaa ctgccagctt tggcaattta ccagactcta
 1800
 gatgacgagt gggatacact gccacagca gaagtttccg tagagcatgt gcaaaacttt
 1860
 tgtgatggat tcctaagtgg aaaattgttg aaagaaaatc gtgaatcgaa aagaaagact
 1920
 cccaagggtg aactctgact tctccttggg actacatatg gcca
 1964

<210> 3130

<211> 273

<212> PRT

<213> Homo sapiens

<400> 3130

Met	Glu	Ala	Ala	Pro	Ser	Arg	Phe	Met	Phe	Leu	Leu	Phe	Leu	Leu	Thr
1				5				10					15		
Cys	Glu	Leu	Ala	Ala	Glu	Val	Ala	Ala	Glu	Val	Glu	Lys	Ser	Ser	Asp
			20					25					30		
Gly	Pro	Gly	Ala	Ala	Gln	Glu	Pro	Thr	Trp	Leu	Thr	Asp	Val	Pro	Ala
			35				40					45			
Ala	Met	Glu	Phe	Ile	Ala	Ala	Thr	Glu	Val	Ala	Val	Ile	Gly	Phe	Phe
	50					55					60				
Gln	Asp	Leu	Glu	Ile	Pro	Ala	Val	Pro	Ile	Leu	His	Ser	Met	Val	Gln

65					70					75					80
Lys	Phe	Pro	Gly	Val	Ser	Phe	Gly	Ile	Ser	Thr	Asp	Ser	Glu	Val	Leu
				85					90					95	
Thr	His	Tyr	Asn	Ile	Thr	Gly	Asn	Thr	Ile	Cys	Leu	Phe	Arg	Leu	Val
			100					105					110		
Asp	Asn	Glu	Gln	Leu	Asn	Leu	Glu	Asp	Glu	Asp	Ile	Glu	Ser	Ile	Asp
		115					120					125			
Ala	Thr	Lys	Leu	Ser	Arg	Phe	Ile	Glu	Ile	Asn	Ser	Leu	His	Met	Val
	130					135					140				
Thr	Glu	Tyr	Asn	Pro	Val	Thr	Val	Ile	Gly	Leu	Phe	Asn	Ser	Val	Ile
145				150						155					160
Gln	Ile	His	Leu	Leu	Ile	Met	Asn	Lys	Ala	Ser	Pro	Glu	Tyr	Glu	
			165					170					175		
Glu	Asn	Met	His	Arg	Tyr	Gln	Lys	Ala	Ala	Lys	Leu	Phe	Gln	Gly	Lys
			180					185					190		
Ile	Leu	Phe	Ile	Leu	Val	Asp	Ser	Gly	Met	Lys	Glu	Asn	Gly	Lys	Val
	195						200					205			
Ile	Ser	Phe	Phe	Lys	Leu	Lys	Glu	Ser	Gln	Leu	Pro	Ala	Leu	Ala	Ile
	210					215					220				
Tyr	Gln	Thr	Leu	Asp	Asp	Glu	Trp	Asp	Thr	Leu	Pro	Thr	Ala	Glu	Val
225				230					235					240	
Ser	Val	Glu	His	Val	Gln	Asn	Phe	Cys	Asp	Gly	Phe	Leu	Ser	Gly	Lys
			245					250					255		
Leu	Leu	Lys	Glu	Asn	Arg	Glu	Ser	Lys	Arg	Lys	Thr	Pro	Lys	Val	Glu
		260						265					270		

Leu

<210> 3131
 <211> 1544
 <212> DNA
 <213> Homo sapiens

<400> 3131
 nnaactccag gacgagacgc ggagcgaccc gcgcacgagc gataggcggc gaacgtggcc
 60
 caggccgccc agaccggcag ctgcgtgggg cgggggctgc gctgagccc atactgccgg
 120
 ctccgagctt agcaaagaag cgacttcaga agaagcgaat gcatgtgaaa tcgtctcaag
 180
 ctacctgag ctgagccagt ttaatcacc ccagagagcc gaacaactgc gagcgcaatg
 240
 ggacacaaaa tcattttgtg ttggtctcgg aaagagggtc gtggtcccgc acggatgcgc
 300
 ttgttgggag aaaccttgga gattcacggc aaggcgtaaa gcctggggct tccaacgata
 360
 ctctgggcag ggatggaagc ctagatgcct caccgcaagg agcggccgag cgggtcctcg
 420
 cttcacacac acggcagcac cggcaccgcg gagggaggaa acatgtccc gctgtctctc
 480
 acccggtcgc ctgtgtctcc cctggctgcc cagggcatcc ccctgccagc acaactcaca
 540
 aaatccaatg cgctgtcca cattgatgtg ggcggccaca tgtacaccag cagcctggcc
 600

accctcacca aataccctga atccagaatc ggaagacttt ttgatggtac agagcccatt
 660
 gttttggaca gtctcaaaca gcactatttc attgacagag atggacagat gttcagatat
 720
 atcttgaatt ttctacgaac atccaaactc ctcatctctg atgatttcaa ggactacact
 780
 ttgttatatg aagaggcaaa atattttcag cttcagccca tgttgttgga gatggaaaga
 840
 tggaagcagg acagagaaac tggtcgattt tcaaggccct gtgagtgcct cgtcgtgcgt
 900
 gtggccccag acctcggaga aaggatcacg ctaagcgggtg acaaatcctt gatagaagaa
 960
 gtatttccag agatcggcga cgtgatgtgt aactctgtca atgcaggctg gaatcacgac
 1020
 tcgacgcacg tcatcagggt tccactaaat ggctactgtc acctcaactc agtccaggtc
 1080
 ctcgagaggt tgcagcaaag aggatttgaa atcgtgggct cctgtggggg aggagtagac
 1140
 tcgtcccagt tcagcgaata cgtccttcgg cgggaactga ggcggacgcc ccgtgtaccc
 1200
 tccgtcatcc ggataaagca agagcctctg gactaaatgg acatatttct tatgcaaaaa
 1260
 ggaaaacaca cacaaccaat aactcaaaca aaaaaggagc atttatgtgc agttgggaca
 1320
 gcaaaccaag tcctggacgt aaaatcgaat aaaagacaca tttatatcca atagagacca
 1380
 cacctgtatt catatgggaa caattggaat agtgatatcc tcaagggtgta aaaaatatat
 1440
 aaatatatat atatatgtca aaaggtagga aatgcaaaaa agaaaaaaaa aaaaagggtga
 1500
 cagccgcagt tgggtgctgtg atagccatga aatatcctgg gccc
 1544

<210> 3132

<211> 283

<212> PRT

<213> Homo sapiens

<400> 3132

Met	Pro	His	Arg	Lys	Glu	Arg	Pro	Ser	Gly	Ser	Ser	Leu	His	Thr	His
1				5					10					15	
Gly	Ser	Thr	Gly	Thr	Ala	Glu	Gly	Gly	Asn	Met	Ser	Arg	Leu	Ser	Leu
			20					25					30		
Thr	Arg	Ser	Pro	Val	Ser	Pro	Leu	Ala	Ala	Gln	Gly	Ile	Pro	Leu	Pro
			35				40					45			
Ala	Gln	Leu	Thr	Lys	Ser	Asn	Ala	Pro	Val	His	Ile	Asp	Val	Gly	Gly
			50			55					60				
His	Met	Tyr	Thr	Ser	Ser	Leu	Ala	Thr	Leu	Thr	Lys	Tyr	Pro	Glu	Ser
65					70				75					80	
Arg	Ile	Gly	Arg	Leu	Phe	Asp	Gly	Thr	Glu	Pro	Ile	Val	Leu	Asp	Ser
				85			90							95	
Leu	Lys	Gln	His	Tyr	Phe	Ile	Asp	Arg	Asp	Gly	Gln	Met	Phe	Arg	Tyr
			100				105					110			
Ile	Leu	Asn	Phe	Leu	Arg	Thr	Ser	Lys	Leu	Leu	Ile	Pro	Asp	Asp	Phe

115	120	125
Lys Asp Tyr Thr Leu Leu Tyr Glu Glu Ala Lys Tyr Phe Gln Leu Gln		
130	135	140
Pro Met Leu Leu Glu Met Glu Arg Trp Lys Gln Asp Arg Glu Thr Gly		
145	150	155
Arg Phe Ser Arg Pro Cys Glu Cys Leu Val Val Arg Val Ala Pro Asp		
165	170	175
Leu Gly Glu Arg Ile Thr Leu Ser Gly Asp Lys Ser Leu Ile Glu Glu		
180	185	190
Val Phe Pro Glu Ile Gly Asp Val Met Cys Asn Ser Val Asn Ala Gly		
195	200	205
Trp Asn His Asp Ser Thr His Val Ile Arg Phe Pro Leu Asn Gly Tyr		
210	215	220
Cys His Leu Asn Ser Val Gln Val Leu Glu Arg Leu Gln Gln Arg Gly		
225	230	235
Phe Glu Ile Val Gly Ser Cys Gly Gly Gly Val Asp Ser Ser Gln Phe		
245	250	255
Ser Glu Tyr Val Leu Arg Arg Glu Leu Arg Arg Thr Pro Arg Val Pro		
260	265	270
Ser Val Ile Arg Ile Lys Gln Glu Pro Leu Asp		
275	280	

<210> 3133

<211> 621

<212> DNA

<213> Homo sapiens

<400> 3133

```

ggatccttgg ggtgttgctt cgccagctgg aaacctctgt ggacagtggc gtctttgccc
60
gagtttttct ctagcccgtt aggcctcgtt tgtccactcg gcttggcacg ctacgcctgg
120
gtctgatgcc tgccaagggc aagccaggcg tggagcagcg agaggtgtgt gagtgagcat
180
ggggtccagc catcgcacac agcaggcacg ctggctgcag tggggcaggc agctccacgc
240
gcagtcattg ctccctgtga agctgcagct ggaccaggcg tactacaagc agcttccact
300
gcaggcactg gggaacatgg tggcacctgg aagcttggag acgctagaaa ccgcagagcc
360
ctaaagaggg tgtcacagcc ctggctcagg gagctcctag gtctgggctt cccgaagggc
420
tgcagctctt ctctccttct tctttccttg tcacctgcaa cgtggtgagc aagggaacata
480
tttcagcgct gtttgtgtta cacctctttt agccccgccg ttccggcaggt cccgagttct
540
tgtgctgcat ccaggaagaa tgagactgaa gtgaaatcag aagaaggccc aggttggacg
600
atcctacgtg atgatttcat g
621

```

<210> 3134

<211> 51

<212> PRT

<213> Homo sapiens

<400> 3134

```

Ala Arg Asp Ile Phe Gln Arg Cys Leu Cys Tyr Thr Ser Phe Ser Pro
 1           5           10          15
Ala Val Arg Gln Val Pro Ser Ser Cys Ala Ala Ser Arg Lys Asn Glu
          20          25          30
Thr Glu Val Lys Ser Glu Glu Gly Pro Gly Trp Thr Ile Leu Arg Asp
          35          40          45
Asp Phe Met
      50

```

<210> 3135

<211> 3166

<212> DNA

<213> Homo sapiens

<400> 3135

```

nncgtgtgtg gatttgagac cgagctcaat gtccagtttg tcagccacat gtcactccac
60
gtggacaagg agcagtggat gttttcgatc tgctgcactg cctgcgactt cgtcaccatg
120
gaggaagcag agataaagac tcacattggc accaagcaca caggggaaga caggaagacc
180
cccagcgaat caaatagccc ctcttcatcc tccctctcag ctctgagtga ttcagccaac
240
agcaaagatg attcagatgg ctcccagaaa aacaagggcg ggaacaatct gctgggcatc
300
tctgtcatgc ctgggagcca gccctcactg aacagtgagg aaaagccaga gaaagggttc
360
gaatgtgttt tttgcaactt tgtctgcaag acgaagaaca tgtttgagcg tcatctgcag
420
atacacctca tcacccggat gtttgagtgt gatgtgtgcc acaagttcat gaagaccccc
480
gaacagctgc tggagcataa gaaatgccac actgtcccca ccggtgggct caactcagga
540
cagtggtag tttcagactc ctctaggtgc ccattctgca tttattccac caaccgcccc
600
gctgccatgg agtgccacct caagaccac taccagatgg agtacaagtg cccgatctgc
660
cagacggtga aagccaacca gctggagctg gagacgcaca cccgggagca ccgcctgggc
720
aaccactaca agtgcgacca gtgcggtac ctgtccaaga ccgccaacaa gtcacgcag
780
cacgtgcgcg tccacaccgg gagcggggcc ttccactggg accagtgcag ctacagctgc
840
aagcgcaagg acaatctcaa cctgcacaag aagctgaagc acgccccacg ccagaccttc
900
agctgcgaag agtgccgtgt caagaccaca caccctttcg tcttcagccg ccacgtcaag
960
aagcaccaga gtggggactg ccccaggagg gacaagaagg gcctgtgtcc agccccaaag
1020
gaaccggccg gcccgggggc cccgctcctg gtggtcggga gctcccggaa tctcctgtct
1080

```

ccctgtcag ttatgtctgc ctcccaggt ctgcagaccg tggccctgtc ggcagcccac
1140
ggcagcagct cagagcccaa cctggcactc aaggctttgg ccttcaacgg ctcccctttg
1200
cgctttgaca agtaccgga ctcagatttt gcccatctca ttcccttgac aatgttatac
1260
cccaagaacc acttggatct cacattccac cctccccgac ctcagactgc gcctcccagc
1320
atccccctac ccaaacactc cttcctggcc tatctcggac tgagagaaaag agcagagact
1380
gtctgagggc agccatgttc tgtacaaaaa acagagagac aaaagacaaa aaaaaaaaaa
1440
aaaccacaaa acttaaacac aaccccagca ggtgtatgtt gctgcaaaac ctacagaccc
1500
cgatgggtct ggaacatgtg tactgtatat ctttagtaag gaatagaaaa ttggctctgt
1560
gtgtatacct attgcattga cctgaaagct gctttatcca atcttcagag aggtgaccta
1620
ctgcatactt ctaccttcag aggcattgct cccagccac ccactccac tctcagccct
1680
tctccgtact tttctctgaa aggaatcttg tcttggttaa ccctaaagag agtgtcctta
1740
atagcaatca gcacttgtaa gcttatatac tgggtgcattt gggtttctgt tgggtgaatg
1800
cgggtgtgtg gcgtttgtgg attctgaaag agaaagccgt gtgtcgtgtg ccatgacatt
1860
tctattgcac attctttgta ctggcttctt taacagcgat gaacgttctt ttcctcctg
1920
ggttgttcat ccacgacagt ctctccctgt gctccttcat cacctttccc tctctctttg
1980
atggctacag agtggtaggg cctgggtgctt agtcgatgaa ggaatggtag ccatctacag
2040
tgctgctgga gatttccgcc agagcgctgg agaccttgcg ctcagatctt ctctggtgat
2100
gaagaggcga ggaatcaagt gactgatctg gaagaaatat ctcgcagcac tgcagctaac
2160
atcacagaac ttaagtgtgt tttgtgtgtg tgcccacacg tagacaaatg tgtacgggtg
2220
acacacacag tgcattctt ttttaaggga gattatatat atatatgaga tgtattaatt
2280
cagtgggttac catttggttg caggaaaaag aaatgtatgg gtgaaaaaat ttatgggtga
2340
taaattccagc caaggagatt aaaaggggtt tggataaatt ctgggtataa atgctcagac
2400
taaaaaaaag aaatggcagt tttgcacagt gctatggtct tgcactagtt tttgtttctc
2460
atctgaaaaa aaaaaagtaa aataaaagga agaaaatgta ctttttttat ggaatgagta
2520
gactgtatgt ttgaagattt agccacaacc tctttgacat ataatgacgc aacaaaaagg
2580
tgctgttttag tcctatgggt cagtttatgc ccctgacaag tttccattgt gttttgccga
2640
tcttctggct aatcgtggta tcctccatgt tattagtaat tctgtattcc attttgtaa
2700

cgctggttag atgtaacctg ctaggaggct aactttatac ttatttaaaa gctcttattt
 2760
 tgtgggcatt aaaatggcaa tttatgtgca gcactttatt gcagcaggaa gcagggtgtgg
 2820
 gttggttgta aagctctttg ctaatcttaa aaagtaatgg gtgatttaaa aagaaaaaag
 2880
 gaaaaaaatc tttggctgaa tatgttcatt gcttgtattt ttaaaacaac agaatttcca
 2940
 gtatgaaaca ggctgaaaga gcaggaagaa atgttctttg tataataatg ggaagtttgg
 3000
 aatataaaaag tttatatatt atttatctat tggagaactg gtgtacagga ggaacatttt
 3060
 cttactgtgt tgctgttttc catcatgtgt taccctaaga gttgggggttt tttaaaatct
 3120
 gtttcaccag gggaaaataa aagcatccct aatgttaaaa aaaaaa
 3166

<210> 3136

<211> 278

<212> PRT

<213> Homo sapiens

<400> 3136

Val	Ser	Asp	Ser	Ser	Arg	Cys	Pro	Phe	Cys	Ile	Tyr	Ser	Thr	Asn	Arg
1				5					10					15	
Pro	Ala	Ala	Met	Glu	Cys	His	Leu	Lys	Thr	His	Tyr	Gln	Met	Glu	Tyr
			20					25					30		
Lys	Cys	Pro	Ile	Cys	Gln	Thr	Val	Lys	Ala	Asn	Gln	Leu	Glu	Leu	Glu
		35					40					45			
Thr	His	Thr	Arg	Glu	His	Arg	Leu	Gly	Asn	His	Tyr	Lys	Cys	Asp	Gln
	50					55					60				
Cys	Gly	Tyr	Leu	Ser	Lys	Thr	Ala	Asn	Lys	Leu	Ile	Glu	His	Val	Arg
65					70					75				80	
Val	His	Thr	Gly	Ser	Gly	Pro	Phe	His	Trp	Asp	Gln	Cys	Ser	Tyr	Ser
				85				90					95		
Cys	Lys	Arg	Lys	Asp	Asn	Leu	Asn	Leu	His	Lys	Lys	Leu	Lys	His	Ala
			100					105					110		
Pro	Arg	Gln	Thr	Phe	Ser	Cys	Glu	Glu	Cys	Leu	Phe	Lys	Thr	Thr	His
	115						120					125			
Pro	Phe	Val	Phe	Ser	Arg	His	Val	Lys	Lys	His	Gln	Ser	Gly	Asp	Cys
	130					135					140				
Pro	Glu	Glu	Asp	Lys	Lys	Gly	Leu	Cys	Pro	Ala	Pro	Lys	Glu	Pro	Ala
145					150					155					160
Gly	Pro	Gly	Ala	Pro	Leu	Leu	Val	Val	Gly	Ser	Ser	Arg	Asn	Leu	Leu
				165					170					175	
Ser	Pro	Leu	Ser	Val	Met	Ser	Ala	Ser	Gln	Ala	Leu	Gln	Thr	Val	Ala
		180						185					190		
Leu	Ser	Ala	Ala	His	Gly	Ser	Ser	Ser	Glu	Pro	Asn	Leu	Ala	Leu	Lys
	195						200					205			
Ala	Leu	Ala	Phe	Asn	Gly	Ser	Pro	Leu	Arg	Phe	Asp	Lys	Tyr	Arg	Asn
	210					215					220				
Ser	Asp	Phe	Ala	His	Leu	Ile	Pro	Leu	Thr	Met	Leu	Tyr	Pro	Lys	Asn
225					230					235					240
His	Leu	Asp	Leu	Thr	Phe	His	Pro	Pro	Arg	Pro	Gln	Thr	Ala	Pro	Pro

	245		250		255
Ser Ile Pro Ser Pro Lys His Ser Phe Leu Ala Tyr Leu Gly Leu Arg					
	260		265		270
Glu Arg Ala Glu Thr Val					
275					

<210> 3137
 <211> 5773
 <212> DNA
 <213> Homo sapiens

<400> 3137
 ntgtacaatt tcagtggtta ttgaaatgga caaggcataa taagcagtat tttgtggaat
 60
 cctaagaggt gtagtacagc gaatagccga ttggcagcct atgaagtcct tgtgatgttg
 120
 gctgatagtt caccttcaaa tcttcaaatt attataaaaag aactgctttc tatgcatcac
 180
 cagcctgacc ctgctcttac caaggagttt gattaccttc cccagtgga tagcagggtcc
 240
 agttcagggg ttgtggggct gagaaatggg ggtgcaactt gttatatgaa tgcagtcttc
 300
 cagcagctgt atatgcaacc tgggctccct gagtcattac tttcagtgga tgatgacaca
 360
 gacaatccag atgatagcgt gttttaccaa gtgcagtctc tctttggaca tttaatggaa
 420
 agcaagctgc agtactatgt acctgagaat ttttgggaaga ttttcaagat gtggaataaa
 480
 gaactttatg tgagagaaca gcaggatgca tatgaattct ttactagtct cattgatcag
 540
 atggatgaat acctcaagaa aatggggaga gaccaaattt ttaagaatac atttcagggc
 600
 atctactctg atcagaagat ctgtaaagac tgtcctcaca gatatgagcg tgaagaagct
 660
 ttcattggctc tcaatctagg agtgacttct tgtcagagtt tggaaatttc tttggacca
 720
 tttgttagag gagaagttct agaaggaagt aatgcgtact actgtgaaaa gtgtaaagaa
 780
 aagagaataa cagtgaaaag gacctgtatt aaatctttac ctagcgtctt ggtaattcac
 840
 ctaatgagat ttgggtttga ctgggaaagc ggacgctcca ttaaataatga tgaacaaata
 900
 aggtttccct ggatgctaaa catggagcct tacacagttt caggaatggc tcgccaagat
 960
 tcttcttctg aagttgggga aaatgggcga agtgtggatc agggcggttg aggatcccc
 1020
 cgaaaaaagg ttgccctcac agaaaactat gaacttgtcg gtgtcatcgt acacagtggg
 1080
 caggcacacg caggccacta ctattccttc attaaggaca ggcgagggtg tggaaaagga
 1140
 aagtgggtata aatttaataa cacagttata gaagaatttg acctaaatga cgagaccctg
 1200
 gagtatgaat gctttggagg agaatataga ccaaagttt atgatcaaac aaaccatac
 1260

actgatgtgc gccgaagata ctggaatgcc tatatgcttt tctaccaaag ggtgtctgat
1320
cagaactccc cagtattacc aaagaaaagt cgagtcagcg ttgtacggca ggaagctgag
1380
gatctctctc tgtcagctcc atcttcacca gaaatttcac ctcagtcac cctcggcccc
1440
cataggccga acaatgaccg gctgtctatt cttaccaagc tggttaaaaa aggcgagaag
1500
aaaggactgt ttgtggagaa aatgcctgct cgaatatacc agatggtgag agatgagaac
1560
ctcaagttta tgaagaatag agatgtatac agtagtgatt atttcagttt tgttttgtct
1620
ttagcttcat tgaatgctac taaattaaag catccatatt atccttgcac ggcaaagggt
1680
agcttacagc ttgctattca attccttttt caaacttata tacggacaaa gaagaaactc
1740
agggttgata ctgaagaatg gattgctacc attgaagcat tgctttcaaa aagttttgat
1800
gcttgctcagt ggtagttga atattttatt agttctgaag gacgagaatt gataaagatt
1860
ttcttactgg agtgcaatgt gagagaagta cgagttgctg tggccaccat tctggagaaa
1920
accctagaca gtgccttggt ttatcaggat aagttaaaaa gccttcatca gttactggag
1980
gtactacttg ctctgttggc caaagacgtc ccagaaaatt gtaaaaactg tgctcagtac
2040
tttttctctg tcaacacttt tgtacaaaag caaggaatta gggctggaga tcttcttctg
2100
aggcattcag ctctgaggca catgatcagc ttctctctag gggccagtcg gcaaaacaat
2160
cagatacgtc gatggagttc agcacaagca cgagaatttg ggaatcttca caatacagtg
2220
gcgttacttg ttttgcatc agatgtctca tcccaaagga atgttgctcc tggcatatct
2280
aagcaacgac caccatttag cattgctccc tcaagccctc tggtgcccct ccatgaggag
2340
gtagaagcct tggtgttcat gtctgaaggg aaaccttacc tgtagaggt aatgtttgct
2400
ttgcgggagc tgacaggctc gctcttggca ctcatgaga tggtagtgta ctgctgtttc
2460
tgtaatgagc atttttcctt cacaatgctg catttcatta agaaccaact agaaacggct
2520
ccacctcatg agttaaagaa tacgttccaa ctacttcacg aaatattggt tattgaagat
2580
cctatacaag cagagcgagt taaatttgtg ttgagacag aaaatggatt actagctttg
2640
atgcaccaca gtaatcatgt ggacagtagt cgctgctacc agtgtgtcaa atttcttgct
2700
actcttgctc aaaagtgtcc tgcagctaag gagtacttca aggagaattc ccaccactgg
2760
agctgggctg tgcagtggct acagaagaag atgtcagaac attactggac accacagagt
2820
aatgtctcta atgaaacatc aactggaaaa accttccagc gaaccatttc agctcaggac
2880

gcgttagcgt atgccacagc tttgttgaat gaaaaagagc aatcaggaag cagtaatggg
2940
tcggagagta gtcctgccaa tgagaacgga gacaggcatc tacagcaggg ttcagaatct
3000
cccatgatga ttggtgagtt gagaagtga cttgatgatg ttgatcccta gaggaacatg
3060
cccagcctga gaggagtcaa gacacaatac tggatgctca gcaccttctt ggaatcagaa
3120
tctcgaaccc tttggaagag cctggagatt ggactgggaa agctgctgtg acttgggcgg
3180
atcgtgtatt tctcaaggaa agcattttta agccactaga aggtttggga gctgtttggc
3240
agtgggagaa ctccggcatg tggatcagct gtcccgaggag cgtgggtctat atgtggattc
3300
acattttctgt ggagattttc ggaaatagag ccagtggcag acttttttgt tacacgaaca
3360
tacaagagtg agcataaagc tgttgctttc tctacgatgc tacaaaagaa attcctttgg
3420
tttttatatt ttaagaaaaa gcaagctgct tttagatatg tgggggcaaa tttttaatct
3480
tgcagtaata ttaaacagga atatccaatt taaaatgatg taaagatgta ataaaattcc
3540
ttttcattgt aaaatagtaa ttaagtcaat ttacacagac ctttgtattt aatatgtctc
3600
cctatttgta tagaatttca gatgggtcta gatgagaacc ctatgcataa gcttggatct
3660
tgatgaaagg ttaccaggat caggatcaaa aattgggaaa tactaagctc ttgaagatat
3720
ttttctgata taattagatt gaaaagagca attttgaaaa tgctgtgttc tccagaagta
3780
caggtgcat tatttgacat caattactta aagaagttat gagttgttcc ccaaacagat
3840
tttaaaaaca gcaaaataaa agcactttaa gatataattt tactgagttt aacttcacag
3900
aattatcttt ttaatgcttg gagacatatt gaataaactg tagtcttaaa tcatgtgatc
3960
tgcaatcgtt tgcttttgct taaaacataa ttactgaaac ccttgggtatt ggttgatat
4020
gaagttaact atttgagttg gtacacactg cttgtgagtt tcatagttat tgtaatgcag
4080
agaaggaatt tgagaatttg tttctcctca acatgactaa ttaacactga aaagtcagtc
4140
aaggtttaag atttattttc ccagaaataa atataaagca attgaataac catccattta
4200
gtcgtatttc caaagtatag caccattcac tcatttatac cagctccctt ttatgggtgtg
4260
ggggagaggt ttacaccac atatttcata tatattttgt acattttgta ttttgaattg
4320
ctcacatttt cggccctggt ttgccttttag ttacaggtcc tgccttattt tcatctcacc
4380
atgcacagaa ctagggagcc ttaggaagtg ccaggttttc actgtcagat ttgccaagtc
4440
acagaggcgc agccagccct gaagtgcctg tctggctgct gtggcattgt gtgggcattgt
4500

ggccaggcag atggcatctc attactgtgc tctcgccatg gcccagtctt ttcattctct
4560
ggcagtgagg gtttctgtgc tgtcagactt cattgttatt ctgtgacttg ctggaggttg
4620
gcagtggcct ttgtcaaaca cactgagaag atggaagggc cagcacttaa gagcagaact
4680
gtacccttag agaaacggac agaggcgagt ggcaaacttc agacggttcc aatgggtcttg
4740
cagtttgaaa tgtgatgttc taccattggg tttgagtacg tgaatacttc ctgtcctact
4800
gtttccccta ccctattctc accttctctc cgcccacatc ctcaccaaga gattgtgtgg
4860
gacatgacct tgaaatgctg gcgatgatcc aactgggat atcatcgctg gcgactgcac
4920
tctcaggagc ccaaaatcag gagtgaatt gccacttcta gtcagcccct tatttcctat
4980
ggaaacaacg ccttccgcac ccctagcacc tgccgtctc actgtaaagc ttcatacagga
5040
tcgtccaccg tgtatattat acgcttcaga tcatgttgct tatattgttg ctgcaatgac
5100
catcgttttc actttgctgg taaccacttg attgctgaca gctacagtca atgaacctgc
5160
tgatgacttt ttttaatgta gtacaacagt gacagttatg acaggcttac cttggaagag
5220
ttgtcatttt tactgccaat tttttggatg aagatgtttt tataaacctt tcaaaatggg
5280
ctgcaaacag agcaggaatt gcacaattaa ctcaactcaa taatgctgtg tgttctcaag
5340
aagctccctt agtgaggccg atcttaagat ggccgattct gcccgttgaa ggcatcctgg
5400
gaaagaaaac aagcatccca gcgggcatct caccacgact tctcctggag tcctcacacg
5460
gtcactgaca actacagtca gttttaggaa ctagagtgcc gtatcatcag acttaccctg
5520
tcctgcccc a ccttccctgc taacatcgag gtgtgtgcag ttaccttctg agcttggaac
5580
aagcagactg gaattttcct ctgctacctc ttgtgtataa aatcttggtt ataaaatttc
5640
aaaaggaagt agatacacta gggaagaacc ttaattctaa atttggttca tgtgtggcaa
5700
agttcttagc ttctaagagt ataaaataaa tttttcaaaa acaaaaaaaaa accaaaaaaaa
5760
aaaaaaaaaa aaa
5773

<210> 3138

<211> 977

<212> PRT

<213> Homo sapiens

<400> 3138

Leu Ala Asp Ser Ser Pro Ser Asn Leu Gln Ile Ile Ile Lys Glu Leu

1

5

10

15

Leu Ser Met His His Gln Pro Asp Pro Ala Leu Thr Lys Glu Phe Asp

2356

2357

				885					890					895					
Trp	Thr	Pro	Gln	Ser	Asn	Val	Ser	Asn	Glu	Thr	Ser	Thr	Gly	Lys	Thr				
			900					905					910						
Phe	Gln	Arg	Thr	Ile	Ser	Ala	Gln	Asp	Ala	Leu	Ala	Tyr	Ala	Thr	Ala				
		915					920					925							
Leu	Leu	Asn	Glu	Lys	Glu	Gln	Ser	Gly	Ser	Ser	Asn	Gly	Ser	Glu	Ser				
	930					935					940								
Ser	Pro	Ala	Asn	Glu	Asn	Gly	Asp	Arg	His	Leu	Gln	Gln	Gly	Ser	Glu				
945					950					955					960				
Ser	Pro	Met	Met	Ile	Gly	Glu	Leu	Arg	Ser	Asp	Leu	Asp	Asp	Val	Asp				
				965				970						975					

Pro

<210> 3139
 <211> 503
 <212> DNA
 <213> Homo sapiens

<400> 3139
 nggatcctct gtttaggact gacggttgct gtggactctt atttttggcg gcagctcaact
 60
 tggccggaag gaaaggtgct ttggtacaac actgtcctga acaaaagctc caactggggg
 120
 acctccccgc tgctatggta cttctactca gccctgcccc ggggctggg ctgcagcctg
 180
 ctcttcatcc ccttgggctt ggtagacaga aggacgcacg cgccgacggt gctggcactg
 240
 ggcttcatgg cactctactc cctcctgcc aacaaggagc tacgcttcat catctatgcc
 300
 ttcccccagc tcaacatcac ggctgccaga ggctgctcct acctgtgagt gctctttttg
 360
 tgacatgcat ttttatagtt tcattggaaa cagggttcaact gatttactgt tgggggggatg
 420
 tatgtgtgtg ttttaattttt gaaacagggt cttgctctgt cgcccagctg gagtgggggt
 480
 tactgcaccc ctcaactcct agg
 503

<210> 3140
 <211> 115
 <212> PRT
 <213> Homo sapiens

<400> 3140
 Xaa Ile Leu Cys Leu Gly Leu Thr Val Ala Val Asp Ser Tyr Phe Trp
 1 5 10 15
 Arg Gln Leu Thr Trp Pro Glu Gly Lys Val Leu Trp Tyr Asn Thr Val
 20 25 30
 Leu Asn Lys Ser Ser Asn Trp Gly Thr Ser Pro Leu Leu Trp Tyr Phe
 35 40 45
 Tyr Ser Ala Leu Pro Arg Gly Leu Gly Cys Ser Leu Leu Phe Ile Pro
 50 55 60
 Leu Gly Leu Val Asp Arg Arg Thr His Ala Pro Thr Val Leu Ala Leu

65					70					75					80
Gly	Phe	Met	Ala	Leu	Tyr	Ser	Leu	Leu	Pro	His	Lys	Glu	Leu	Arg	Phe
				85					90					95	
Ile	Ile	Tyr	Ala	Phe	Pro	Met	Leu	Asn	Ile	Thr	Ala	Ala	Arg	Gly	Cys
			100					105					110		
Ser	Tyr	Leu													
			115												

<210> 3141
 <211> 1815
 <212> DNA
 <213> Homo sapiens

<400> 3141
 nnattcttgg atgacatccc tcagcatgtc tgagcgactg ctgagggaga aaatgatgcc
 60
 caggttggcg tccccggccc accggccagg agaggcctgc gctgcacacg cgcagaccga
 120
 gcatccgcgt caagaggcga agagagcgcg cgctccccac gtcctgcgct cctggctgcc
 180
 gggcattcgt ctcagccgtg actctcgcca ggccggggct ggcgcgccca cgtctgaaga
 240
 gcgatgcccc gggagatcat caccctgcag ctggggccagt gcggcaacca gattgggttc
 300
 gagttctgga aacagctgtg cgccgagcat ggtatcagcc ccgagggcat cgtggaggag
 360
 ttcgccaccg agggcactga ccgcaaggac gtctttttct accaggcaga cgatgagcac
 420
 tacatcccc gggccgtgct gctggacttg gaaccccggt tgatccactc catcctcaac
 480
 tccccctatg ccaagctcta caaccagag aacatctacc tgtcggaaca tggaggagga
 540
 gctggcaaca actgggccag cggattctcc caggggtgaga aaattcatga ggacattttt
 600
 gacatcatag accgggaggc agatggtagt gacagtctag agggctttgt gctgtgtcac
 660
 tccattgctg gggggacagg ctctggactg ggttcctacc tcttagaacg gctgaatgac
 720
 aggtatccta agaagctggt gcagacatac tcagtgtttc ccaaccagga cgagatgagc
 780
 gatgtggtgg tccagcctta caattcactc ctcacactca agaggctgac gcagaatgca
 840
 gactgtgtgg tgggtgctgga caacacagcc ctgaaccgga ttgccacaga ccgcctgcac
 900
 atccagaacc catccttctc ccagatcaac cagctggtgt ctaccatcat gtcagccagc
 960
 accaccaccc tgcgctaccc tggctacatg aacaatgacc tcatcggcct catcgccctg
 1020
 ctcatcccca cccacggct ccacttctc atgaccggct acaccccgct cactacagac
 1080
 cagtcagtgg ccagcgtgag gaagaccacg gtccctggatg tcatgaggcg gctgctgcag
 1140
 cccaagaacg tgatggtgtc cacaggccga gaccgccaga ccaaccactg ctacatcgcc
 1200

atcctcaaca tcatccaggg agaggtggac cccaccaggg tccacaagag cttgcagagg
 1260
 atccgggaac gcaagttggc caacttcac ccgtggggcc ccgccagcat ccaggtggcc
 1320
 ctgtcgagga agtctcccta cctgccctcg gccaccggg tcagcgggct catgatggcc
 1380
 aaccacacca gcatctctc gctcttcgag agaacctgtc gccagtatga caagctgcgt
 1440
 aagcgggagg ccttcctgga gcagttccgc aaggaggaca tgttcaagga caactttgat
 1500
 gagatggaca catccagggg gattgtgcag cagctcatcg atgagtacca tgcggccaca
 1560
 cggccagact acatctcctg gggcaccag gagcagttag tccccagga cagggaccct
 1620
 catctgcctt actggttggc ccaagccctg cctgactgac caccctctca gagcacagat
 1680
 caggacctc acgcatctct ttctcatata catggactct ctgttggcct gcaaacacat
 1740
 ttactttctc tcttatgaga ctatttatct ttaataaagc actggatata aaaaaaaaaa
 1800
 aaaaaaaaaa aaaaa
 1815

<210> 3142

<211> 451

<212> PRT

<213> Homo sapiens

<400> 3142

Met	Pro	Arg	Glu	Ile	Ile	Thr	Leu	Gln	Leu	Gly	Gln	Cys	Gly	Asn	Gln
1				5					10					15	
Ile	Gly	Phe	Glu	Phe	Trp	Lys	Gln	Leu	Cys	Ala	Glu	His	Gly	Ile	Ser
			20					25					30		
Pro	Glu	Gly	Ile	Val	Glu	Glu	Phe	Ala	Thr	Glu	Gly	Thr	Asp	Arg	Lys
		35					40					45			
Asp	Val	Phe	Phe	Tyr	Gln	Ala	Asp	Asp	Glu	His	Tyr	Ile	Pro	Arg	Ala
	50					55					60				
Val	Leu	Leu	Asp	Leu	Glu	Pro	Arg	Val	Ile	His	Ser	Ile	Leu	Asn	Ser
65				70					75					80	
Pro	Tyr	Ala	Lys	Leu	Tyr	Asn	Pro	Glu	Asn	Ile	Tyr	Leu	Ser	Glu	His
			85						90					95	
Gly	Gly	Gly	Ala	Gly	Asn	Asn	Trp	Ala	Ser	Gly	Phe	Ser	Gln	Gly	Glu
			100					105					110		
Lys	Ile	His	Glu	Asp	Ile	Phe	Asp	Ile	Ile	Asp	Arg	Glu	Ala	Asp	Gly
		115				120					125				
Ser	Asp	Ser	Leu	Glu	Gly	Phe	Val	Leu	Cys	His	Ser	Ile	Ala	Gly	Gly
	130					135					140				
Thr	Gly	Ser	Gly	Leu	Gly	Ser	Tyr	Leu	Leu	Glu	Arg	Leu	Asn	Asp	Arg
145				150						155				160	
Tyr	Pro	Lys	Lys	Leu	Val	Gln	Thr	Tyr	Ser	Val	Phe	Pro	Asn	Gln	Asp
			165						170					175	
Glu	Met	Ser	Asp	Val	Val	Val	Gln	Pro	Tyr	Asn	Ser	Leu	Leu	Thr	Leu
			180				185						190		
Lys	Arg	Leu	Thr	Gln	Asn	Ala	Asp	Cys	Val	Val	Val	Leu	Asp	Asn	Thr

195	200	205
Ala Leu Asn Arg Ile	Ala Thr Asp Arg Leu His	Ile Gln Asn Pro Ser
210	215	220
Phe Ser Gln Ile Asn Gln	Leu Val Ser Thr Ile	Met Ser Ala Ser Thr
225	230	235
Thr Thr Leu Arg Tyr	Pro Gly Tyr Met Asn	Asn Asp Leu Ile Gly Leu
245	250	255
Ile Ala Ser Leu Ile	Pro Thr Pro Arg	Leu His Phe Leu Met Thr Gly
260	265	270
Tyr Thr Pro Leu Thr	Thr Asp Gln Ser Val	Ala Ser Val Arg Lys Thr
275	280	285
Thr Val Leu Asp Val	Met Arg Arg Leu	Leu Gln Pro Lys Asn Val Met
290	295	300
Val Ser Thr Gly Arg	Asp Arg Gln Thr	Asn His Cys Tyr Ile Ala Ile
305	310	315
Leu Asn Ile Ile Gln	Gly Glu Val Asp	Pro Thr Gln Val His Lys Ser
325	330	335
Leu Gln Arg Ile Arg	Glu Arg Lys Leu	Ala Asn Phe Ile Pro Trp Gly
340	345	350
Pro Ala Ser Ile Gln	Val Ala Leu Ser	Arg Lys Ser Pro Tyr Leu Pro
355	360	365
Ser Ala His Arg Val	Ser Gly Leu Met	Met Ala Asn His Thr Ser Ile
370	375	380
Ser Ser Leu Phe Glu	Arg Thr Cys Arg	Gln Tyr Asp Lys Leu Arg Lys
385	390	395
Arg Glu Ala Phe Leu	Glu Gln Phe Arg	Lys Glu Asp Met Phe Lys Asp
405	410	415
Asn Phe Asp Glu Met	Asp Thr Ser Arg	Glu Ile Val Gln Gln Leu Ile
420	425	430
Asp Glu Tyr His Ala	Ala Thr Arg Pro	Asp Tyr Ile Ser Trp Gly Thr
435	440	445
Gln Glu Gln		
450		

<210> 3143

<211> 356

<212> DNA

<213> Homo sapiens

<400> 3143

gctagctacc aaaaaggcca ggagaaggaa gagcaacgtc tcagtgtcag gagggggccc
60

ggagacagac cctctgcggt ggagtctggg agtgggtgtg ttgctgcttg ggctgggctg
120

caggcctgag ctccctggctg gtgggaaggg gaggctgctg gtccacagtg tgggggtgct
180

tcacgggttaa ccaagccatc ccccatgctg ggcgtgagga actagcggaa ttgagagcct
240

cagaaaccca ggtgctgctg tgtgaggctg tcgcagccac gaagatgacc atgactgcaa
300

gggctgtgag gggccccctg agcgtccagc agcactaaca gataggaacc acgcgt
356

<210> 3144

<211> 81
 <212> PRT
 <213> Homo sapiens

<400> 3144
 Met Val Ile Phe Val Ala Ala Thr Ala Ser His Ser Ser Thr Trp Val
 1 5 10 15
 Ser Glu Ala Leu Asn Ser Ala Ser Ala Ser Arg Pro Ala Trp Gly Met
 20 25 30
 Ala Trp Leu Thr Val Lys His Pro His Thr Val Asp Gln Gln Pro Pro
 35 40 45
 Leu Pro Thr Ser Gln Glu Leu Arg Pro Ala Ala Gln Pro Lys Gln Gln
 50 55 60
 Pro His His Ser Gln Thr Pro Pro Gln Arg Val Cys Leu Arg Ala Pro
 65 70 75 80
 Ser

<210> 3145
 <211> 436
 <212> DNA
 <213> Homo sapiens

<400> 3145
 taaaagcccg gagccgctca gctatggaga agctgcgctc caaaactcca ctcggcctcc
 60
 atccgaagag cccgattacc agctgctcgg gagggccaag caggaccggg ggaggccaaa
 120
 ctccgaggag cccgctccac ctgccctcag gaggggtgttt aaaacggagg ttgccaccgt
 180
 ttacgcacct gccctcagtg ccagggcccc cgagcctggt ttgtcagact ctgcagccgc
 240
 cagccagtgg tcactctgcc cggcagatga cgagcggagg agagccacac atctcaacgg
 300
 gctccaggcg cctcggaaa ctgccctggc ctgctcacc ccatgcagt gcctgtcccc
 360
 cgaatgtagt gagcagccgt cgcagactca caccgcgcg gggctgggga accagctaag
 420
 tcccacagcg gttgct
 436

<210> 3146
 <211> 131
 <212> PRT
 <213> Homo sapiens

<400> 3146
 Met Glu Lys Leu Arg Ser Lys Thr Pro Leu Gly Leu His Pro Lys Ser
 1 5 10 15
 Pro Ile Thr Ser Cys Ser Gly Gly Pro Ser Arg Thr Gly Gly Gly Gln
 20 25 30
 Thr Pro Arg Ser Pro Leu His Leu Pro Ser Gly Gly Cys Leu Lys Arg
 35 40 45
 Arg Leu Pro Pro Phe Thr His Leu Pro Ser Val Pro Gly Pro Pro Ser

50		55		60
Leu Val Cys Gln Thr	Leu Gln Pro Pro Ala Ser	Gly His Ser Ala Arg		
65	70	75	80	
Gln Met Thr Ser	Gly Gly Glu Pro His Ile Ser	Thr Gly Ser Arg Arg		
	85	90	95	
Pro Arg Lys Leu	Pro Trp Pro Ala His Pro Arg	Cys Ser Ala Cys Pro		
	100	105	110	
Pro Asn Val Val	Ser Ser Arg Arg Arg Leu Thr	Pro Arg Arg Gly Trp		
	115	120	125	
Gly Thr Ser				
130				

<210> 3147

<211> 3106

<212> DNA

<213> Homo sapiens

<400> 3147

cacaccggct gggaggcagc cgtctgtgca gcgagcagcc ggcgcgggga ggccgcagtg
 60
 cacggggcgt cacagtcggc aggcagcatg gggaagggag ggaaccaggg cgagggggcc
 120
 gccgagcgcg aggtgtcggg gccaccttc agctgggagg agattcagaa gcataacctg
 180
 cgcaccgaca ggtggctggt cattgaccgc aaggtttaca acatcaccaa atggtccatc
 240
 cagcaccggg ggggccagcg ggtcatcggg cactacgctg gagaagatgc aacggatgcc
 300
 ttccgcgcct tccaccctga cctggaattc gtgggcaagt tcttgaaacc cctgctgatt
 360
 ggtgaactgg ccccgaggga gccagccag gaccacggca agaactcaaa gatcactgag
 420
 gacttccggg ccctgaggaa gacggctgag gacatgaacc tgttcaagac caaccacgtg
 480
 ttcttctctc tcctcctggc ccacatcatc gccctggaga gcattgcatg gttcactgtc
 540
 ttttactttg gcaatggctg gattcctacc ctcatcacgg cctttgtcct tgctacctct
 600
 caggcccaag ctggatggct gcaacatgat tatggccacc tgtctgtcta cagaaaacct
 660
 aagtgggaacc accttggtcca caaatcgtc attggccact taaaggggtgc ctctgccaac
 720
 tggtggaatc atcgccactt ccagcaccac gccaaagcta acatcttcca caaggatccc
 780
 gatgtgaaca tgctgcacgt gtttgttctg gggaatggc agcccatcga gtacggcaag
 840
 aagaagctga aatacctgcc ctacaatcac cagcagcaat acttcttctc gattgggccc
 900
 ccgctgctca tccccatgta tttccagtac cagatcatca tgaccatgat cgtccataag
 960
 aactgggtgg acctggcctg ggccgtcagc tactacatcc ggttcttcat cacctacatc
 1020
 cctttctacg gcatcctggg agccctcctt ttcctcaact tcatcagggt cctggagagc
 1080

cactggtttg tgtgggtcac acagatgaat cacatcgtea tggagattga ccaggaggcc
1140
taccgtgact ggttcagtag ccagctgaca gccacctgca acgtggagca gtccttcttc
1200
aacgactggg tcaagtggaca ccttaacttc cagattgagc accacctctt cccaccatg
1260
ccccggcaca acttacacaa gatcgccccg ctgggtgaagt ctctatgtgc caagcatggc
1320
attgaatacc aggagaagcc gctactgagg gccctgctgg acatcatcag gtccctgaag
1380
aagtctggga agctgtggct ggacgcctac cttcacaaat gaagccacag cccccggac
1440
accgtgggga aggggtgcag gtggggtgat ggccagagga atgatgggct tttgttctga
1500
ggggtgtccg agaggctggg gtatgcactg ctacaggacc ccatgttga tctttctccc
1560
tttctctct cctttttctc ttcacatctc ccccatagca cctgccctc atgggacctg
1620
ccctccctca gccgtcagcc atcagccatg gccctcccag tgccctctag ccccttcttc
1680
caaggagcag agagggtggc accgggggtg gctctgtcct acctccactc tctgccccta
1740
aagatgggag gagaccagcg gtccatgggt ctggcctgtg agtctccccct tgcagcctgg
1800
tcactaggca tcacccccgc tttggttctt cagatgctct tggggttcat aggggcaggt
1860
cctagtctgg cagggccctt gacctcccg gcctggcttc actctccctg acggctgcca
1920
ttgggtccacc ctttcataga gaggcctgct ttgttacaaa gctcgggtct ccctcctgca
1980
gctcggttaa gtacccgagg cctctcttaa gatgtccagg gcccaggcc cgcgggcaca
2040
gccagcccaa accttgggcc ctggaagagt cctccacccc atcactagag tgctctgacc
2100
ctgggctttc acgggccccca ttccaccgcc tccccaaactt gagcctgtga ccttgggacc
2160
aaagggggag tccctcgtct cttgtgactc agcagaggca gtggccacgt tcaggagggg
2220
gccggctggc ctggaggctc agcccacct ccagcttttc ctgagggtgt cctgaggctc
2280
aagattctgg agcaatctga cccttctcca aaggctctgt tatcagctgg gcagtgccag
2340
ccaatccctg gccatttggc cccaggggac gtgggccctg caggctgcag gagggcactg
2400
gagctgggag gtctcgtccc agccctcccc atctcggggc tgctgtgtgg acggcgtgc
2460
ctcaggcact ctctgtctg aacctgccct tactgtgttt aacctgttg tccaggatgc
2520
attctgatag gagggggcgg cagggtggg ccttgtgaca atctgccttt caccacatgg
2580
ccttgccctg gtggccctga ctgtcaggga gggccaggga ggcagagcgg gagggagtct
2640
caggaggagg ctgccctgag gggctgggga ggggtacct catgaggacc aggggtggagc
2700

tgagaagagg aggaggtggg ggctggaggt gctggtagct gaggggacgg gcaagtgaga
 2760
 ggggaggggag ggaagtctctg ggaggatcct gagctgctgt tgcagtctaa ccactaatc
 2820
 agttcttaga ttcaggggaa gggcaggcac caacaactca gaatgggggc tttcggggag
 2880
 ggcgcctagt ccccccagct ctaagcagcc aggagggacc tgcactaag catctgggtt
 2940
 gccatggcaa tggcatgccc ccagctact gtatgcccc gacccccgca gaggcagaat
 3000
 gaacccatag ggagctgac gtaatgttta tcatgttact tccccacccc tacatttttt
 3060
 gaaataaaat aaggaatttt attctcaaaa aaaaaaaaaa aaaaaa
 3106

<210> 3148

<211> 444

<212> PRT

<213> Homo sapiens

<400> 3148

Met	Gly	Lys	Gly	Gly	Asn	Gln	Gly	Glu	Gly	Ala	Ala	Glu	Arg	Glu	Val
1			5					10					15		
Ser	Val	Pro	Thr	Phe	Ser	Trp	Glu	Glu	Ile	Gln	Lys	His	Asn	Leu	Arg
		20					25					30			
Thr	Asp	Arg	Trp	Leu	Val	Ile	Asp	Arg	Lys	Val	Tyr	Asn	Ile	Thr	Lys
		35				40					45				
Trp	Ser	Ile	Gln	His	Pro	Gly	Gly	Gln	Arg	Val	Ile	Gly	His	Tyr	Ala
	50					55				60					
Gly	Glu	Asp	Ala	Thr	Asp	Ala	Phe	Arg	Ala	Phe	His	Pro	Asp	Leu	Glu
65				70					75					80	
Phe	Val	Gly	Lys	Phe	Leu	Lys	Pro	Leu	Leu	Ile	Gly	Glu	Leu	Ala	Pro
			85					90						95	
Glu	Glu	Pro	Ser	Gln	Asp	His	Gly	Lys	Asn	Ser	Lys	Ile	Thr	Glu	Asp
		100					105					110			
Phe	Arg	Ala	Leu	Arg	Lys	Thr	Ala	Glu	Asp	Met	Asn	Leu	Phe	Lys	Thr
	115					120					125				
Asn	His	Val	Phe	Phe	Leu	Leu	Leu	Ala	His	Ile	Ile	Ala	Leu	Glu	
	130				135					140					
Ser	Ile	Ala	Trp	Phe	Thr	Val	Phe	Tyr	Phe	Gly	Asn	Gly	Trp	Ile	Pro
145				150					155					160	
Thr	Leu	Ile	Thr	Ala	Phe	Val	Leu	Ala	Thr	Ser	Gln	Ala	Gln	Ala	Gly
			165				170							175	
Trp	Leu	Gln	His	Asp	Tyr	Gly	His	Leu	Ser	Val	Tyr	Arg	Lys	Pro	Lys
		180					185					190			
Trp	Asn	His	Leu	Val	His	Lys	Phe	Val	Ile	Gly	His	Leu	Lys	Gly	Ala
	195					200					205				
Ser	Ala	Asn	Trp	Trp	Asn	His	Arg	His	Phe	Gln	His	His	Ala	Lys	Pro
	210				215					220					
Asn	Ile	Phe	His	Lys	Asp	Pro	Asp	Val	Asn	Met	Leu	His	Val	Phe	Val
225				230					235					240	
Leu	Gly	Glu	Trp	Gln	Pro	Ile	Glu	Tyr	Gly	Lys	Lys	Lys	Leu	Lys	Tyr
			245				250						255		
Leu	Pro	Tyr	Asn	His	Gln	His	Glu	Tyr	Phe	Phe	Leu	Ile	Gly	Pro	Pro

260	265	270
Leu Leu Ile Pro Met Tyr Phe Gln Tyr Gln Ile Ile Met Thr Met Ile		
275	280	285
Val His Lys Asn Trp Val Asp Leu Ala Trp Ala Val Ser Tyr Tyr Ile		
290	295	300
Arg Phe Phe Ile Thr Tyr Ile Pro Phe Tyr Gly Ile Leu Gly Ala Leu		
305	310	315
Leu Phe Leu Asn Phe Ile Arg Phe Leu Glu Ser His Trp Phe Val Trp		
325	330	335
Val Thr Gln Met Asn His Ile Val Met Glu Ile Asp Gln Glu Ala Tyr		
340	345	350
Arg Asp Trp Phe Ser Ser Gln Leu Thr Ala Thr Cys Asn Val Glu Gln		
355	360	365
Ser Phe Phe Asn Asp Trp Phe Ser Gly His Leu Asn Phe Gln Ile Glu		
370	375	380
His His Leu Phe Pro Thr Met Pro Arg His Asn Leu His Lys Ile Ala		
385	390	395
Pro Leu Val Lys Ser Leu Cys Ala Lys His Gly Ile Glu Tyr Gln Glu		
405	410	415
Lys Pro Leu Leu Arg Ala Leu Leu Asp Ile Ile Arg Ser Leu Lys Lys		
420	425	430
Ser Gly Lys Leu Trp Leu Asp Ala Tyr Leu His Lys		
435	440	

<210> 3149

<211> 1006

<212> DNA

<213> Homo sapiens

<400> 3149

ncttcgccgg cgtcccgacc cgaggccgga cccgaggcca gtcccgccgc tgccaccgaa
 60
 gccagtgcgg ggcctgagag ggacgcgcgc cccggggccc ccgccgcggg caccatgggc
 120
 gctgcccact ccgcgtctga ggaggtgcgg gagctcgagg gcaagaccgg cttctcatcg
 180
 gatcagatcg agcagctcca tcggagattt aagcagctga gtggagatca gcctaccatt
 240
 cgcaaggaga acttcaacaa tgtcccgac ctggagctca accccatccg atccaaaatt
 300
 gttcgtgcct tcttcgacaa caggaacctg cgcaaggac ccagtggcct ggctgatgag
 360
 atcaatttcg aggacttcc taccatcatg tctacttcc ggcccatcga caccaccatg
 420
 gacgaggaac aggtggagct gtcccggaag gagaagctga gatttctgtt ccacatgtac
 480
 gactcggaca gcgacggccg catcactctg gaagaatata gaaatgtaaa gtggctcagg
 540
 agctgctgtc gggaaacctt cacatcgaga aggagtccgc tcgctccatc gccgacgggg
 600
 ccatgatgga ggcggccagc gtgtgcatgg ggcagatgga gcctgatcag gtgtacgagg
 660
 ggatcacctt cgaggacttc ctgaagatct ggcaggggat cgacattgag accaagatgc
 720

acgtccgctt ccttaacatg gaaaccatgg ccctctgcc a ctgacccacc gccacctccg
 780
 cggagaaact gcactttgca atggggccgc ctccccgcgt agctggagca gcccagggcc
 840
 ggcggacagc ctcttctgc agcgccggt a catagccaag gctcgtctgc gcaccttgtg
 900
 tctttagtagg tatggtatgt gggacttcgc tgtttttatc tccaataaaa aaaaaaaaaa
 960
 gggtttgttaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa
 1006

<210> 3150

<211> 201

<212> PRT

<213> Homo sapiens

<400> 3150

Xaa	Ser	Pro	Ala	Ser	Arg	Pro	Glu	Ala	Gly	Pro	Glu	Ala	Ser	Pro	Ala
1				5					10					15	
Ala	Ala	Thr	Glu	Ala	Ser	Ala	Gly	Pro	Glu	Arg	Asp	Ala	Arg	Pro	Gly
			20					25					30		
Ala	Pro	Ala	Ala	Gly	Thr	Met	Gly	Ala	Ala	His	Ser	Ala	Ser	Glu	Glu
		35					40					45			
Val	Arg	Glu	Leu	Glu	Gly	Lys	Thr	Gly	Phe	Ser	Ser	Asp	Gln	Ile	Glu
	50					55					60				
Gln	Leu	His	Arg	Arg	Phe	Lys	Gln	Leu	Ser	Gly	Asp	Gln	Pro	Thr	Ile
65					70					75				80	
Arg	Lys	Glu	Asn	Phe	Asn	Asn	Val	Pro	Asp	Leu	Glu	Leu	Asn	Pro	Ile
			85						90				95		
Arg	Ser	Lys	Ile	Val	Arg	Ala	Phe	Phe	Asp	Asn	Arg	Asn	Leu	Arg	Lys
			100					105					110		
Gly	Pro	Ser	Gly	Leu	Ala	Asp	Glu	Ile	Asn	Phe	Glu	Asp	Phe	Leu	Thr
		115					120					125			
Ile	Met	Ser	Tyr	Phe	Arg	Pro	Ile	Asp	Thr	Thr	Met	Asp	Glu	Glu	Gln
	130					135					140				
Val	Glu	Leu	Ser	Arg	Lys	Glu	Lys	Leu	Arg	Phe	Leu	Phe	His	Met	Tyr
145					150					155				160	
Asp	Ser	Asp	Ser	Asp	Gly	Arg	Ile	Thr	Leu	Glu	Glu	Tyr	Arg	Asn	Val
			165					170					175		
Lys	Trp	Ser	Arg	Ser	Cys	Cys	Arg	Glu	Thr	Leu	Thr	Ser	Arg	Arg	Ser
			180					185					190		
Pro	Leu	Ala	Pro	Ser	Pro	Thr	Gly	Pro							
		195					200								

<210> 3151

<211> 2079

<212> DNA

<213> Homo sapiens

<400> 3151

gaggggacgt cgtcgtagag ggccggagcg ggcggggcggc gacggacccg gctcccgcg
 60
 aggacggagc cgtgggtcag gtcggcccct cccaacacc accccggggc tccgcccctt
 120

cctgggcctc tcggtggagc agggaccoga accggtgcc atccagtccg gtgccatctg
180
aagccccctt cccagaaaat gagccacaga gcaagctgac cccagcgaca cagcccccca
240
gccctactat atttccgttc ctatcaaaaa atggatgact cggagacagg tttcaatctg
300
aaagtcgtcc tggtcagttt caagcagtgt ctcgatgaga aggaagaggt cttgctggac
360
ccctacattg ccagctggaa gggcctggtc aggtttctga acagcctggg caccatcttc
420
tcattcatct ccaaggacgt ggtctccaag ctgcggatca tggagcgctt caggggcggc
480
ccgcagagcg agcactaccg cagcctgcag gccatggtag cccacgagct gagcaaccgg
540
ctggtggacc tggagggccg ctcccaccac cggaggtctg gctgccggac ggtgctgcgc
600
ctgcaccgcg ccctgcactg gctgcagctg ttcttgaggg gcctgcgtac cagccccgag
660
gacgcacgca cctccgcact ctgcgccgac tcctacaacg cctcgctggc cgcctaccac
720
ccctgggtcg tgcgccgtgc cgtcaccgtg gccttctgca cgtgcccac acgcgaggtc
780
ttcctggagg ccatgaacgt ggggcccccg gagcaggccg tgcagatgct aggcgaggcc
840
ctccccctca tccagcgtgt ctacaacgtc tcccagaagc tctacgccga gcactccctg
900
ctggacctgc cctagaggcg ggaagccagg gccgcaccgg ctttcctgct gcagatctgg
960
gctgcggtag ccagggccgt gagtccctg gcagagcctt ctgggcgctg cgggaacagg
1020
agatcctctg tcgccccgtg gagctgagct ggtaggaac cacagactgt gacagagaag
1080
gtggcgacca gccagaaga ggccccacct ctcggtccgg aacaagacgc ctcagccacg
1140
gctccccctc ggctattac acgcgtgcgc agccaggcct cgccagggtg cgtgacag
1200
cagagcaggc aggggtgggg gccgggcccc caagagcccc aaaggtcgcc accccctagc
1260
ctgtggggtg catctgcgaa ccagggtgaa gtcacaggtc ccggggtgtg gaggctccat
1320
cctttctctt ttctgccagc cgatgtgtcc tcattctcagg cccgtgcctg ggacccccgtg
1380
tctgccagg tgggcagcct tgagcccagg ggaactcagt cctccatgc cctggctggc
1440
agaaaccctc aacagcagtc tgggcaactg ggggctctcc ccgcctctcc tgccttgttt
1500
gccctcagc gtgccaggca gactgggggc aggacagccg gaagctgaga ccaaggctcc
1560
tcacagaagg gccaggaag tccccgccct tgggacagcc tcctccgtag cccctgcacg
1620
gcaccagtcc cccgagggac gcagcaggcc gcctcccga gcggccgtgg gtctgcacag
1680
cccagcccag cccaaggccc ccaggagctg ggactctgct acaccagtg aaatgctgtg
1740

tcccttctcc cccgtgcccc ttgatgcccc ctccccacag tgctcaggag acccgtgggg
 1800
 cacggaacag gaggggtctgg accctgtggc ccagccaaag gctaccagac agccacaacc
 1860
 agcccagcca ccatccagtg cctggggcct ggccactggc tcttcacagt ggaccccagc
 1920
 acctcgggggt ggcagagggga cggccccccac ggcccagcag acatgcgagc ttccagagtg
 1980
 caatctatgt gatgtcttcc aacgttaata aatcacacag cctcccagga gggagacgct
 2040
 ggggtgcaaa aaaaaagcaa aaaaaaaaaa aaaaaaat
 2079

<210> 3152
 <211> 214
 <212> PRT
 <213> Homo sapiens

<400> 3152
 Met Asp Asp Ser Glu Thr Gly Phe Asn Leu Lys Val Val Leu Val Ser
 1 5 10 15
 Phe Lys Gln Cys Leu Asp Glu Lys Glu Glu Val Leu Leu Asp Pro Tyr
 20 25 30
 Ile Ala Ser Trp Lys Gly Leu Val Arg Phe Leu Asn Ser Leu Gly Thr
 35 40 45
 Ile Phe Ser Phe Ile Ser Lys Asp Val Val Ser Lys Leu Arg Ile Met
 50 55 60
 Glu Arg Leu Arg Gly Gly Pro Gln Ser Glu His Tyr Arg Ser Leu Gln
 65 70 75 80
 Ala Met Val Ala His Glu Leu Ser Asn Arg Leu Val Asp Leu Glu Gly
 85 90 95
 Arg Ser His His Pro Glu Ser Gly Cys Arg Thr Val Leu Arg Leu His
 100 105 110
 Arg Ala Leu His Trp Leu Gln Leu Phe Leu Glu Gly Leu Arg Thr Ser
 115 120 125
 Pro Glu Asp Ala Arg Thr Ser Ala Leu Cys Ala Asp Ser Tyr Asn Ala
 130 135 140
 Ser Leu Ala Ala Tyr His Pro Trp Val Val Arg Arg Ala Val Thr Val
 145 150 155 160
 Ala Phe Cys Thr Leu Pro Thr Arg Glu Val Phe Leu Glu Ala Met Asn
 165 170 175
 Val Gly Pro Pro Glu Gln Ala Val Gln Met Leu Gly Glu Ala Leu Pro
 180 185 190
 Phe Ile Gln Arg Val Tyr Asn Val Ser Gln Lys Leu Tyr Ala Glu His
 195 200 205
 Ser Leu Leu Asp Leu Pro
 210

<210> 3153
 <211> 1498
 <212> DNA
 <213> Homo sapiens

<400> 3153

nttttttttt tttttttttt tttttttttt tttttttttt ttttttctact aaaaataatt
60
taattagaaa cggagttttg gcaagggagg cagaagcggc tcctttttctc cccttgggcg
120
cccactcagc aaccaacaag gaggaaagcc cccgcagtgc tcggccagtg ccgcgccatc
180
gccaccaggg agcgccccgc gcgcgggtcca cgtggcagag gtcgcgccct cgcgggcgcg
240
ggaggagccg cacgccacag tggcaggtcc caggccgtca ctccgagctc tcgccttccg
300
ggccgctgtc cggcgtgggc gggaggaggg gtctccggcg cgagcgcttg acccggcgcg
360
agggctgcag cagcctccgc ttcagcacag cagccactgt gtcctggctg tccgctgtgg
420
gccccagta gatgctctcc ccgcgtcgga agttttctgtg cagccgtgtg cagagcggtg
480
ccagggtgag cagcaccagc aggaaggtca gggccatggc agcccaggcg gcctcttcag
540
tgcgtggggg ggggccccgc gctgcccgtg gagcgctgct gcgcgagggg ccggggaagc
600
ctgacttgaa cagacacagc cccctgggct gccttgcccc ttgggcacct gagcctctgt
660
cctggagctg gcattgcctc caggcgcccc cggcagcagg gagacagtgg gcacagatgg
720
ggcattactc tccctaccag ggattccccg catggactgc ttggccttca agtccctgg
780
ggaagcagag ggaaacctca gggctgagcg agtgggctgg ggaccaaggg cagcccgcag
840
cctccgcctc ttggcaccac tagaagaggg ctgcctgggc ccttgagatg tcacctctgt
900
gccagggggc cgccagctcc gcaaaagcaa aggccaaaac cccgggcctg cacacacctc
960
cttcgggcac agcctccctc taccgggagt tggctcggag ggagcaggcc ctgaaaggct
1020
ttcacagtag atccatgcct tcttcttctc ctgcttctc ctccgcctcc tcatcagcca
1080
gtgggcagcc caggctggct ctaccaggc catctccagc gccagcccc atgcagtcag
1140
caccaggggc cgatcctgcg tgaggctgaa gtcaggggtg agggaagggt tagccataca
1200
agcataggcc aggagggcaa gctggagctt cagccagga tgggcacagg ggtggtagag
1260
gaaggtgaca tcctcagcct gccctgggct cactcgtgtg taggtcactc ttggtgacac
1320
ctgcggaggc agaggccaca ggctctcggg acaatgggct cccgcctcct ccgcgggtcc
1380
agccatcacc tgtgggtcca aagcgaagag ttggggcgct ggacgcggcg aggccctgcc
1440
ctctctctcc ccaggcccag cccgccagcg gaagaactcc gcgtccccct cggcgcg
1498

<210> 3154

<211> 65

<212> PRT

<213> Homo sapiens

<400> 3154

```

Thr Asp Thr Ala Pro Trp Ala Ala Leu Pro Val Gly His Leu Ser Leu
 1           5           10           15
Cys Pro Gly Ala Gly Ile Ala Ser Arg Arg Pro Arg Gln Gln Gly Asp
          20           25           30
Ser Gly His Arg Trp Gly Ile Thr Leu Pro Thr Arg Asp Ser Arg His
          35           40           45
Gly Leu Leu Gly Leu Gln Ala Pro Trp Gly Ser Arg Gly Lys Pro Gln
 50           55           60
Gly
65

```

<210> 3155

<211> 551

<212> DNA

<213> Homo sapiens

<400> 3155

```

caattggatg taattatggt aaaaccttat aaactctgta acaatcaaga agaaaacgat
60
gcagtgtctt ctgctaagaa accaaagcta gccctggaag attcggaaaa cactgcctct
120
actaactgtg actcttcttc agaaggactg gaaaaggaca cagcaacaca gagaagtgc
180
cagacttgcc tagaaccatc atgttcatgt tcttctgaaa atcaggaatg ccagactgct
240
gccagccctg gggaaaattct ggaaattttg aagaaagggg aggcatttgt ttagatatt
300
gacttggatt ttttttctagt caagaatccc ttcaaaaaaa tgttcactca ggaagagtac
360
aaaatcttac aagagctgta ccaatttaag aaacctggca ccaacctaac agaggaagat
420
ttggtagata ttgttgatac tcgaattcat caattagagg atttagaagc cactttcgct
480
gatttgtgtg atggtgatga tgaagaaacg gtacagggat gggcttcaaa ccctggaatg
540
gaatcactag t
551

```

<210> 3156

<211> 178

<212> PRT

<213> Homo sapiens

<400> 3156

```

Met Val Lys Pro Tyr Lys Leu Cys Asn Asn Gln Glu Glu Asn Asp Ala
 1           5           10           15
Val Ser Ser Ala Lys Lys Pro Lys Leu Ala Leu Glu Asp Ser Glu Asn
          20           25           30
Thr Ala Ser Thr Asn Cys Asp Ser Ser Ser Glu Gly Leu Glu Lys Asp
          35           40           45
Thr Ala Thr Gln Arg Ser Asp Gln Thr Cys Leu Glu Pro Ser Cys Ser

```

50		55		60
Cys Ser Ser Glu Asn Gln Glu Cys Gln Thr Ala Ala Ser Pro Gly Glu				
65		70		75
Ile Leu Glu Ile Leu Lys Lys Gly Lys Ala Phe Val Leu Asp Ile Asp				80
	85		90	95
Leu Asp Phe Phe Ser Val Lys Asn Pro Phe Lys Lys Met Phe Thr Gln				
	100		105	110
Glu Glu Tyr Lys Ile Leu Gln Glu Leu Tyr Gln Phe Lys Lys Pro Gly				
	115		120	125
Thr Asn Leu Thr Glu Glu Asp Leu Val Asp Ile Val Asp Thr Arg Ile				
	130		135	140
His Gln Leu Glu Asp Leu Glu Ala Thr Phe Ala Asp Leu Cys Asp Gly				
145		150		155
Asp Asp Glu Glu Thr Val Gln Gly Trp Ala Ser Asn Pro Gly Met Glu				160
	165		170	175
Ser Leu				

<210> 3157

<211> 903

<212> DNA

<213> Homo sapiens

<400> 3157

```

nntgaagact agaggaggta ggtccttggg ggacctagtc agtaggtatt tacaaggcag
60
gcccttggga tctacagtg ggatgggcac ccacaaaccc caggttgcgg ccagccttac
120
tctctggtag gacttctgat ggtgggggca cctccccagg tcacagtcca ggtgcagggc
180
caggaggtcc tatcagagaa gatggagccc tccagtttcc agcccctacc tgaaactgag
240
cctccaactc cagagcctgg gcccaagaca cctccttagga ctatgcagga atcaccactg
300
ggcctgcagg tgaaagagga gtcagagggt acagaggact cagatttctt ggagtctggg
360
cctctagctg ccaccagga gtctgtaccc accctcctgc ctgaggaggc ccagtgacca
420
ctgtgatttc agagatgtgg gaccgtgctg gaccagatct tccccacag caagactggg
480
cctgaggggc cctcatggag ggagcacccc agggccctgt ggcatgagga agctgggggc
540
atcttctccc cagggttcgc gctgcagcta ggcagcatct ccgcagggtcc aggtagtgtg
600
agccctcacc tccacgtccc ctgggacctc ggcattggct gcttttctgg ccagatccaa
660
tcaccctccc gcgaagggtg ctttgcgcat gcgcttctgc tccccagcga tctgaggagt
720
gaacaggacc ccacggacga ggatccctgc cgggggtgtg gccctgctct ggtcaccacc
780
cgctggcgct cccccagggg ccggagccgg ggccgccccg gcaactggggg cgggggtggtt
840
aggggcgggc gttgcatgt atgtggcaag gtgttcagcc aacgcagcaa cctgctgagg
900

```

cac
903

<210> 3158
<211> 92
<212> PRT
<213> Homo sapiens

<400> 3158
Met Val Gly Ala Pro Pro Gln Val Thr Val Gln Val Gln Gly Gln Glu
1 5 10 15
Val Leu Ser Glu Lys Met Glu Pro Ser Ser Phe Gln Pro Leu Pro Glu
20 25 30
Thr Glu Pro Pro Thr Pro Glu Pro Gly Pro Lys Thr Pro Pro Arg Thr
35 40 45
Met Gln Glu Ser Pro Leu Gly Leu Gln Val Lys Glu Glu Ser Glu Val
50 55 60
Thr Glu Asp Ser Asp Phe Leu Glu Ser Gly Pro Leu Ala Ala Thr Gln
65 70 75 80
Glu Ser Val Pro Thr Leu Leu Pro Glu Glu Ala Gln
85 90

<210> 3159
<211> 2408
<212> DNA
<213> Homo sapiens

<400> 3159
nncgcgtact ggctgtacgg agcaggagca agaggctcgcc gccagcctcc gccgccgagc
60
ctcgttcgtg tccccgcccc tcgctcctgc agctactgct cagaaacgct ggggcgcccc
120
ccctggcaga ctaacgaagc agctcccttc ccaccccaac tgcagggtcta attttgacg
180
ctttgcctgc catttcttcc aggttgaggg agccgcagag gcggaggctc gcgtattcct
240
gcagtcagca cccacgtcgc ccccggaagc tcgggtgctca ggcccttcgc gagcggggct
300
ctccgtctgc ggcccttctg gaaggctctg ggccggtgca gaggcgggcc gtccggtttg
360
gtcacctct cccaggaaac ttcacactgg agagccaaaa ggagtggagc agcctgtctt
420
ggagattttc ctggggaaat cctgagggtca ttcattatga agtgtaccgc gcgggagtg
480
ctcagagtaa ccacagtgc gttcatggct agagcaattc cagccatggg ggttcccaat
540
gccactttat tggagaaact tttggaaaaa tacatggatg aggatgggtga gtgggtggata
600
gccaaacaac gagggaaaag ggccatcaca gacaatgaca tgcagagtat tttggacctt
660
cataataaat tacgaagtca ggtgtatcca acagcctcta atatggagta tatgacatgg
720
gatgtagagc tggaaagatc tgcagaatcc tgggctgaaa gttgcttggt ggaacatgga
780

cctgcaagct tgcttccatc aattggacag aatttgggag cacactgggg aagatatagg
840
ccccgcagct ttcattgtaca atcgtggtat gatgaagtga aagacttttag ctacccatat
900
gaacatgaat gcaacccata ttgtccattc aggtgttctg gccctgtatg tacacattat
960
acacaggtcg tgtgggcaac tagtaacaga atcggttgtg ccattaattt gtgtcataac
1020
atgaacatct gggggcagat atggcccaaa gctgtctacc tgggtgtgcaa ttactcccca
1080
aagggaact ggtggggcca tgccccttac aaacatgggc ggccctgttc tgcttgccca
1140
cctagttttg gagggggctg tagagaaaat ctgtgtctaca aagaagggtc agacaggtat
1200
tatccccctc gagaagagga aacaaatgaa atagaacgac agcagtcaca agtccatgac
1260
accatgtcc ggacaagatc agatgatagt agcagaaatg aagtcataag cgcacagcaa
1320
atgtcccaaa ttgtttcttg tgaagtaaga ttaagagatc agtgcaaagg aacaacctgc
1380
aataggtagc aatgtcctgc tggctgtttg gatagtaaag ctaaagttat tggcagtgtg
1440
cattatgaaa tgcaatccag catctgtaga gctgcaattc attatggtat aatagacaat
1500
gatggtggct gggtagatat cactagacaa ggaagaaagc attatttcat caagtccaat
1560
agaaatggta ttcaaacaat tggcaaatat cagtctgcta attccttcac agtctctaaa
1620
gtaacagttc aggctgtgac ttgtgaaaca actgtggaca gctctgtcca tttcataagc
1680
ctgcttcaca ttgccaaga gtatactgtc ctctgtaactg tatgcaagca aatccacatt
1740
atgctcgtgt aattgggact cgagtttatt ctgatctgtc cagtatctgc agagcagcag
1800
tacatgctgg gagtagttcg aaatcacggg gggttatgtt atgtaatgcc tgtggacca
1860
agaaagacct acattgcttc ttttcagaat ggaatcttct cagaaagttt acagaatcct
1920
ccaggaggaa aggcattcag agtgtttgct gttgtgtgaa actgaatact tggaagagga
1980
ccataaagac tattccaaat gcaatatttc tgaattttgt ataaaactgt aacattactg
2040
tacagagtac atcaactatt ttcagcccaa aaagggtgcca aatgcatata aatcttgata
2100
aacaagtct ataaaataaa acatgggaca ttagcttttg gaaaagtaat gaaaatataa
2160
tggttttaga aatcctgtgt taaatattgc tatattttct tagcagttat ttctacagt
2220
aattacatag tcatgattgt tctacgtttc atatattata tgggtgcttg tatatgccac
2280
taataaaatg aatctaaaca ttgaatgtga atggccctca gaaaatcatc tagtgcattt
2340
aaaaataatc gactctaaaa ctgaaagaaa ccttatcaca ttttccccag ttcaatgcta
2400

tgccatta
2408

<210> 3160
<211> 431
<212> PRT
<213> Homo sapiens

<400> 3160

Met	Lys	Cys	Thr	Ala	Arg	Glu	Trp	Leu	Arg	Val	Thr	Thr	Val	Leu	Phe
1				5					10					15	
Met	Ala	Arg	Ala	Ile	Pro	Ala	Met	Val	Val	Pro	Asn	Ala	Thr	Leu	Leu
			20					25					30		
Glu	Lys	Leu	Leu	Glu	Lys	Tyr	Met	Asp	Glu	Asp	Gly	Glu	Trp	Trp	Ile
		35					40					45			
Ala	Lys	Gln	Arg	Gly	Lys	Arg	Ala	Ile	Thr	Asp	Asn	Asp	Met	Gln	Ser
	50					55					60				
Ile	Leu	Asp	Leu	His	Asn	Lys	Leu	Arg	Ser	Gln	Val	Tyr	Pro	Thr	Ala
65					70					75					80
Ser	Asn	Met	Glu	Tyr	Met	Thr	Trp	Asp	Val	Glu	Leu	Glu	Arg	Ser	Ala
				85					90					95	
Glu	Ser	Trp	Ala	Glu	Ser	Cys	Leu	Trp	Glu	His	Gly	Pro	Ala	Ser	Leu
			100					105					110		
Leu	Pro	Ser	Ile	Gly	Gln	Asn	Leu	Gly	Ala	His	Trp	Gly	Arg	Tyr	Arg
		115					120					125			
Pro	Pro	Thr	Phe	His	Val	Gln	Ser	Trp	Tyr	Asp	Glu	Val	Lys	Asp	Phe
		130				135						140			
Ser	Tyr	Pro	Tyr	Glu	His	Glu	Cys	Asn	Pro	Tyr	Cys	Pro	Phe	Arg	Cys
145					150					155					160
Ser	Gly	Pro	Val	Cys	Thr	His	Tyr	Thr	Gln	Val	Val	Trp	Ala	Thr	Ser
				165					170					175	
Asn	Arg	Ile	Gly	Cys	Ala	Ile	Asn	Leu	Cys	His	Asn	Met	Asn	Ile	Trp
			180					185					190		
Gly	Gln	Ile	Trp	Pro	Lys	Ala	Val	Tyr	Leu	Val	Cys	Asn	Tyr	Ser	Pro
		195					200					205			
Lys	Gly	Asn	Trp	Trp	Gly	His	Ala	Pro	Tyr	Lys	His	Gly	Arg	Pro	Cys
	210					215						220			
Ser	Ala	Cys	Pro	Pro	Ser	Phe	Gly	Gly	Gly	Cys	Arg	Glu	Asn	Leu	Cys
225					230					235					240
Tyr	Lys	Glu	Gly	Ser	Asp	Arg	Tyr	Tyr	Pro	Pro	Arg	Glu	Glu	Glu	Thr
				245					250					255	
Asn	Glu	Ile	Glu	Arg	Gln	Gln	Ser	Gln	Val	His	Asp	Thr	His	Val	Arg
			260					265					270		
Thr	Arg	Ser	Asp	Asp	Ser	Ser	Arg	Asn	Glu	Val	Ile	Ser	Ala	Gln	Gln
		275					280					285			
Met	Ser	Gln	Ile	Val	Ser	Cys	Glu	Val	Arg	Leu	Arg	Asp	Gln	Cys	Lys
	290					295						300			
Gly	Thr	Thr	Cys	Asn	Arg	Tyr	Glu	Cys	Pro	Ala	Gly	Cys	Leu	Asp	Ser
305					310					315					320
Lys	Ala	Lys	Val	Ile	Gly	Ser	Val	His	Tyr	Glu	Met	Gln	Ser	Ser	Ile
				325					330					335	
Cys	Arg	Ala	Ala	Ile	His	Tyr	Gly	Ile	Ile	Asp	Asn	Asp	Gly	Gly	Trp
			340					345					350		
Val	Asp	Ile	Thr	Arg	Gln	Gly	Arg	Lys	His	Tyr	Phe	Ile	Lys	Ser	Asn

	355					360						365							
Arg	Asn	Gly	Ile	Gln	Thr	Ile	Gly	Lys	Tyr	Gln	Ser	Ala	Asn	Ser	Phe				
	370						375					380							
Thr	Val	Ser	Lys	Val	Thr	Val	Gln	Ala	Val	Thr	Cys	Glu	Thr	Thr	Val				
385						390					395				400				
Asp	Ser	Ser	Val	His	Phe	Ile	Ser	Leu	Leu	His	Ile	Ala	Gln	Glu	Tyr				
				405					410					415					
Thr	Val	Leu	Val	Thr	Val	Cys	Lys	Gln	Ile	His	Ile	Met	Leu	Val					
			420					425					430						

<210> 3161

<211> 1197

<212> DNA

<213> Homo sapiens

<400> 3161

```

nnaacaccag caaaatTTTT gaaaaagggt gcaaaggagt ttggcttcca aaataatggc
60
ttctcgggta acatcaatag aaacaagacc ggagagataa cagcctcctc caacaaatcc
120
ctcaacttgc taaaaatcaa gcatggcgat ttgttggtcc tgtttccctc gagccttget
180
gggccctcat ctgaaatgga gacgtcagtt ccaccgggct tcaaagtctt tggcgctccc
240
aacgtggtgg aggatgagat tgatcagtag ctcagcaaac aggacgggaa gatttacaga
300
agccgagacc cacagctatg ccgccacggc cctttgggga aatgcgtgca ctgcgtccct
360
ctagagccat tcgatgagga ctatctaaac catctcgagc ctcccgtgaa gcacatgtcc
420
ttccacgctt acatccggaa gctgactgga ggggctgaca aggggaagtt tgttgccctg
480
gagaacatca gctgcaagat taagtcaggg tgcgaggggc acctcccgtg gccgaatggc
540
atctgtacta agtgccagcc gagcgccatc acgctgaaca gacagaagta caggcatgtg
600
gacaatatca tgtttgagaa tcacaccgtc gctgaccgct ttcttgactt ctggagaaaag
660
acaggggaacc agcattttgg gtacttatac ggacggtaca cggagcacia agacattccc
720
cttggcatca gggctgaagt ggctgcgatt tatgagccac ctcagattgg tacacagaac
780
agcttggagc ttcttgagga tccaaaagct gaagtgggtc atgaaattgc tgccaaactt
840
ggcctgcgga aggttggttg gatatttaca gacctcgtct cagaagatac ccgaaagggt
900
accgtccgct acagtcgaaa taaggacacc tatttcctaa gttcagaaga gtgcatcact
960
gcaggagact tccagaacaa gcatcccaac atgtgccggc tctctccaga cggacatttt
1020
ggatccaagt ttgttactgc agtgggtaca ggtggctcctg acaaccaagt ccactttgaa
1080
gggtaccagg tgtccaatca gtgtatggca ctggtccgtg atgagtgttt gctgcatg
1140

```

aaggacgccc cggtatgctg acgccaagga gtctagcagt gagcagtacg tgccaaa
1197

<210> 3162

<211> 386

<212> PRT

<213> Homo sapiens

<400> 3162

Xaa	Thr	Pro	Ala	Lys	Phe	Leu	Lys	Lys	Val	Ala	Lys	Glu	Phe	Gly	Phe
1				5					10					15	
Gln	Asn	Asn	Gly	Phe	Ser	Val	Asn	Ile	Asn	Arg	Asn	Lys	Thr	Gly	Glu
			20					25					30		
Ile	Thr	Ala	Ser	Ser	Asn	Lys	Ser	Leu	Asn	Leu	Leu	Lys	Ile	Lys	His
		35					40					45			
Gly	Asp	Leu	Leu	Phe	Leu	Phe	Pro	Ser	Ser	Leu	Ala	Gly	Pro	Ser	Ser
	50					55					60				
Glu	Met	Glu	Thr	Ser	Val	Pro	Pro	Gly	Phe	Lys	Val	Phe	Gly	Ala	Pro
65					70				75					80	
Asn	Val	Val	Glu	Asp	Glu	Ile	Asp	Gln	Tyr	Leu	Ser	Lys	Gln	Asp	Gly
				85				90						95	
Lys	Ile	Tyr	Arg	Ser	Arg	Asp	Pro	Gln	Leu	Cys	Arg	His	Gly	Pro	Leu
			100					105					110		
Gly	Lys	Cys	Val	His	Cys	Val	Pro	Leu	Glu	Pro	Phe	Asp	Glu	Asp	Tyr
	115						120					125			
Leu	Asn	His	Leu	Glu	Pro	Pro	Val	Lys	His	Met	Ser	Phe	His	Ala	Tyr
	130					135					140				
Ile	Arg	Lys	Leu	Thr	Gly	Gly	Ala	Asp	Lys	Gly	Lys	Phe	Val	Ala	Leu
145					150					155					160
Glu	Asn	Ile	Ser	Cys	Lys	Ile	Lys	Ser	Gly	Cys	Glu	Gly	His	Leu	Pro
				165					170					175	
Trp	Pro	Asn	Gly	Ile	Cys	Thr	Lys	Cys	Gln	Pro	Ser	Ala	Ile	Thr	Leu
		180						185					190		
Asn	Arg	Gln	Lys	Tyr	Arg	His	Val	Asp	Asn	Ile	Met	Phe	Glu	Asn	His
		195					200					205			
Thr	Val	Ala	Asp	Arg	Phe	Leu	Asp	Phe	Trp	Arg	Lys	Thr	Gly	Asn	Gln
	210					215					220				
His	Phe	Gly	Tyr	Leu	Tyr	Gly	Arg	Tyr	Thr	Glu	His	Lys	Asp	Ile	Pro
225					230					235					240
Leu	Gly	Ile	Arg	Ala	Glu	Val	Ala	Ala	Ile	Tyr	Glu	Pro	Pro	Gln	Ile
				245					250					255	
Gly	Thr	Gln	Asn	Ser	Leu	Glu	Leu	Leu	Glu	Asp	Pro	Lys	Ala	Glu	Val
			260					265					270		
Val	Asp	Glu	Ile	Ala	Ala	Lys	Leu	Gly	Leu	Arg	Lys	Val	Gly	Trp	Ile
	275						280					285			
Phe	Thr	Asp	Leu	Val	Ser	Glu	Asp	Thr	Arg	Lys	Gly	Thr	Val	Arg	Tyr
	290					295					300				
Ser	Arg	Asn	Lys	Asp	Thr	Tyr	Phe	Leu	Ser	Ser	Glu	Glu	Cys	Ile	Thr
305					310					315					320
Ala	Gly	Asp	Phe	Gln	Asn	Lys	His	Pro	Asn	Met	Cys	Arg	Leu	Ser	Pro
				325					330					335	
Asp	Gly	His	Phe	Gly	Ser	Lys	Phe	Val	Thr	Ala	Val	Ala	Thr	Gly	Gly
		340						345					350		
Pro	Asp	Asn	Gln	Val	His	Phe	Glu	Gly	Tyr	Gln	Val	Ser	Asn	Gln	Cys

355 360 365
 Met Ala Leu Val Arg Asp Glu Cys Leu Leu Pro Cys Lys Asp Ala Pro
 370 375 380
 Val Cys
 385

<210> 3163
 <211> 1075
 <212> DNA
 <213> Homo sapiens

<400> 3163
 ngacctctgt aaaagccaca ggtggactgc ttctggggac atcaccttct tcttcggggg
 60
 tgccagtcac cggaacgtca gaaacctgaa gtgtcatctg gggccatgga cggagagggg
 120
 tggggggtac cagtggaccc actgactcct ggacatcagg atgctctgcc atggcaaagg
 180
 tgttatcatc catgttcttc gtcttcagtt cctcctcggc aggcctgcgc ctcaccggct
 240
 tcatgcagct cttcagctgc cntggcctca gcctccacgg gaccctggca ctcgggctgt
 300
 ggctccagct ggggcagctg ctgctgctgg ggcagccctt cggcatcagt ggggtgtggga
 360
 gcgggtgcga tccggagcag gactgtgtag ttgcggccgt ggttggtggc ccagaaagt
 420
 ccctcanngg ggtctcatag cgcaccancc aagtcgaggc gcgccccatc gcccgcgccc
 480
 tcagcaaagg gcagctggaa ggcaaagcgg tcggtgcggc cgccgtcgtc gggcgaggag
 540
 gcggatgcct ggccgggacc caggccgagc cccggatcca ggatggggatc tctgtctcct
 600
 gttcctcccg ctctcgccca cggcgggctg cgcgggacgt agcgcgctgg gtggtcgcaa
 660
 aaggaagccc agccgtcgtg tgaggccgca cgtgcaccgc cttctcgaag gagcggttca
 720
 gcacgcgtac caaccgcgc agcaccggcg ggcggccccc aggcacccac accccggcac
 780
 ccccggggac cgctccggga ggcggcagca gcgcctccag ctccaccatg acgcgcccc
 840
 agcgtccag acggcccggc gcgggcggca gcgaaaatgt ggggaccagg taaaaccncc
 900
 ccgccagcgg ggacggggca cagcgggtgag ggctcggggc aagcctcctc ttcctcctcc
 960
 ccttcatccc catcctcgcc atcgtcgtcc tcgtcggccc cgcgcgcgcc gccaatatgg
 1020
 cgcgtacggc ccctgtggag ccccgctgc ggcattccgc gccccctcg ccggc
 1075

<210> 3164
 <211> 94
 <212> PRT
 <213> Homo sapiens

<400> 3164

```

Met Asp Gly Glu Gly Trp Gly Leu Pro Val Asp Pro Leu Thr Pro Gly
 1           5           10           15
His Gln Asp Ala Leu Pro Trp Gln Arg Cys Tyr His Pro Cys Ser Ser
          20           25           30
Ser Ser Val Pro Pro Arg Gln Ala Cys Ala Ser Pro Ala Ser Cys Ser
          35           40           45
Ser Ser Ala Ala Xaa Ala Ser Ala Ser Thr Gly Pro Trp His Ser Gly
          50           55           60
Cys Gly Ser Ser Cys Gly Ser Cys Cys Cys Trp Gly Ser Pro Ser Ala
65           70           75           80
Ser Val Gly Val Gly Ala Gly Ala Ile Arg Ser Arg Thr Val
          85           90

```

<210> 3165

<211> 2413

<212> DNA

<213> Homo sapiens

<400> 3165

```

gaaggctgtg cggagcggcg cggcacagag cctgttggtg agctcagtat gtcgtgggaa
60
tccggggccg ggccaggtct aggttcccag gggatggatc tcgtgtggag tgcgtggtac
120
ggaaagtgcg ttaaagggaag agggtcggtg ccactctcgg cccacggcat cgtggtcgcc
180
tggctcagca gggccgagtg ggaccaggtg acggttttatc tgttctgtga cgaccataag
240
ttgcagcggc acgcgcttaa ccgcatcacg gtgtggagga gcaggtcagg caacgaactc
300
cctctggcag tggctttctac tgctgacctg atacgctgta agctcttgga tgtaactggc
360
ggcttgggca ctgatgaact tagactgctc tatggcatgg cattggtcag gtttgtgaat
420
cttatctcag agaggaagac aaagtttgcc aagggtcccc tcaagtgtct ggctcaagag
480
gtaaatattc cggattggat tgttgacctt cgccatgagt tgacccacaa gaaaatgcc
540
catataaatg actgccgcag aggctgctac tttgtcctgg attggctcca gaagacctat
600
tggtgccgcc aactggagaa cagcctgaga gagacctggg agttggagga gttcagggaa
660
gggatagagg aagaggatca agaggaagat aagaacattg ttgttgatga catcacagaa
720
cagaaaccag agcctcagga tgatgggaaa agtacggagt cagatgtaaa ggccgatgga
780
gacagcaaag gcagcgaaga ggtggattct cattgcaaaa aggccctgag tcataaagag
840
ctatatgaaa gagccccgaga actgctggta tcatacgaag aggagcagtt tacgggtgctg
900
gagaaattta ggtatttacc taaggccatt aaggcgtgga ataaccgctc cccacgtgta
960
gaatgtgtcc tggcagagct caaggcgctt acatgcgaga acagggaggc tgtgctggat
1020

```

gcttttctgg atgatggctt ccttggtccc acatttgaac agttggcagc tttgcagata
1080
gaatatgaag aaaacgtgga cttgaatgac gtcctggtgc caaagccgtt ctctcagttc
1140
tggcagcccc tgctcagggg cctgcactcc cagaacttca cgcaggccct attggagagg
1200
atgctctctg aactgccagc cttggggatc agcgggatcc ggcctaccta catcctcaga
1260
tggaccgttg aactgatcgt ggccaacacc aagactggac ggaatgctcg ccgattttct
1320
gcaggccagt gggaagcaag aaggggctgg aggctgttca actgctccgc ctcccttgac
1380
tggccccgga tggttgagtc ctgcttgggc tcaccttgct gggccagccc ccaactcctt
1440
cggatcatct tcaaagccat ggggcagggc ctgccagacg aggagcagga gaagctgctg
1500
cgcattctgtt ccatttatac ccagagtgga gaaaacagcc tggatgcagga gggctctgag
1560
gcctccccca ttgggaagtc tccatataca ctgacagcc tgtattggag cgtcaagcca
1620
gccagctcca gcttcgggtc tgaagcaaag gccagcaac aggaggagca gggcagtgtt
1680
aatgatgtca aggaagagga gaaggaggag aaagagggtc tgccagacca ggtagaggag
1740
gaggaagaaa atgatgacca agaggaggaa gaggaggatg aagatgatga agatgatgaa
1800
gaggaagaca gaatggaggt ggggcctttc tctacagggc aagagtcccc cactgcccag
1860
aatgctaggc ttctggccca gaaaagagga gctttgcagg gctctgcatg gcaggttagc
1920
tcagaagacg tgcgatggga cacatttccc ctaggccgaa tgccaggtea gaccgaggac
1980
ccagcagagc tcatgctgga gaattatgac accatgtatc ttttggacca gcctgtgcta
2040
gagcagcggc tggaaccctc aacatgcaag actgacacct tgggcctgag ctgtggtgtc
2100
ggcagtggca actgcagcaa cagcagcagc agcaacttcg agggccttct ctggagccag
2160
gggcagctgc atgggctcaa aactggcctg cagctcttct gatggccatc cctgggtgcaa
2220
gtgttcatcc agccgtgcca gggcaacagc ccacccccta gtacaactga tgetccctga
2280
gacaacctgg gagacagcct ggatcagcca catcaactca gttgtccacc acaggggaat
2340
tttgaatgtc ttttgttttt gttttgtttt gaaaaataat aaacaggcaa ctgtaaaaaa
2400
aaaaaaaaaa aaa
2413

<210> 3166

<211> 717

<212> PRT

<213> Homo sapiens

<400> 3166

```

Met Ser Trp Glu Ser Gly Ala Gly Pro Gly Leu Gly Ser Gln Gly Met
 1          5          10          15
Asp Leu Val Trp Ser Ala Trp Tyr Gly Lys Cys Val Lys Gly Lys Gly
 20          25          30
Ser Leu Pro Leu Ser Ala His Gly Ile Val Val Ala Trp Leu Ser Arg
 35          40          45
Ala Glu Trp Asp Gln Val Thr Val Tyr Leu Phe Cys Asp Asp His Lys
 50          55          60
Leu Gln Arg Tyr Ala Leu Asn Arg Ile Thr Val Trp Arg Ser Arg Ser
 65          70          75          80
Gly Asn Glu Leu Pro Leu Ala Val Ala Ser Thr Ala Asp Leu Ile Arg
 85          90          95
Cys Lys Leu Leu Asp Val Thr Gly Gly Leu Gly Thr Asp Glu Leu Arg
 100          105          110
Leu Leu Tyr Gly Met Ala Leu Val Arg Phe Val Asn Leu Ile Ser Glu
 115          120          125
Arg Lys Thr Lys Phe Ala Lys Val Pro Leu Lys Cys Leu Ala Gln Glu
 130          135          140
Val Asn Ile Pro Asp Trp Ile Val Asp Leu Arg His Glu Leu Thr His
 145          150          155          160
Lys Lys Met Pro His Ile Asn Asp Cys Arg Arg Gly Cys Tyr Phe Val
 165          170          175
Leu Asp Trp Leu Gln Lys Thr Tyr Trp Cys Arg Gln Leu Glu Asn Ser
 180          185          190
Leu Arg Glu Thr Trp Glu Leu Glu Glu Phe Arg Glu Gly Ile Glu Glu
 195          200          205
Glu Asp Gln Glu Glu Asp Lys Asn Ile Val Val Asp Asp Ile Thr Glu
 210          215          220
Gln Lys Pro Glu Pro Gln Asp Asp Gly Lys Ser Thr Glu Ser Asp Val
 225          230          235          240
Lys Ala Asp Gly Asp Ser Lys Gly Ser Glu Glu Val Asp Ser His Cys
 245          250          255
Lys Lys Ala Leu Ser His Lys Glu Leu Tyr Glu Arg Ala Arg Glu Leu
 260          265          270
Leu Val Ser Tyr Glu Glu Glu Gln Phe Thr Val Leu Glu Lys Phe Arg
 275          280          285
Tyr Leu Pro Lys Ala Ile Lys Ala Trp Asn Asn Pro Ser Pro Arg Val
 290          295          300
Glu Cys Val Leu Ala Glu Leu Lys Gly Val Thr Cys Glu Asn Arg Glu
 305          310          315          320
Ala Val Leu Asp Ala Phe Leu Asp Asp Gly Phe Leu Val Pro Thr Phe
 325          330          335
Glu Gln Leu Ala Ala Leu Gln Ile Glu Tyr Glu Glu Asn Val Asp Leu
 340          345          350
Asn Asp Val Leu Val Pro Lys Pro Phe Ser Gln Phe Trp Gln Pro Leu
 355          360          365
Leu Arg Gly Leu His Ser Gln Asn Phe Thr Gln Ala Leu Leu Glu Arg
 370          375          380
Met Leu Ser Glu Leu Pro Ala Leu Gly Ile Ser Gly Ile Arg Pro Thr
 385          390          395          400
Tyr Ile Leu Arg Trp Thr Val Glu Leu Ile Val Ala Asn Thr Lys Thr
 405          410          415
Gly Arg Asn Ala Arg Arg Phe Ser Ala Gly Gln Trp Glu Ala Arg Arg

```

				420						425					430				
Gly	Trp	Arg	Leu	Phe	Asn	Cys	Ser	Ala	Ser	Leu	Asp	Trp	Pro	Arg	Met				
		435						440					445						
Val	Glu	Ser	Cys	Leu	Gly	Ser	Pro	Cys	Trp	Ala	Ser	Pro	Gln	Leu	Leu				
	450					455					460								
Arg	Ile	Ile	Phe	Lys	Ala	Met	Gly	Gln	Gly	Leu	Pro	Asp	Glu	Glu	Gln				
465					470					475					480				
Glu	Lys	Leu	Leu	Arg	Ile	Cys	Ser	Ile	Tyr	Thr	Gln	Ser	Gly	Glu	Asn				
				485					490					495					
Ser	Leu	Val	Gln	Glu	Gly	Ser	Glu	Ala	Ser	Pro	Ile	Gly	Lys	Ser	Pro				
			500					505					510						
Tyr	Thr	Leu	Asp	Ser	Leu	Tyr	Trp	Ser	Val	Lys	Pro	Ala	Ser	Ser	Ser				
		515					520					525							
Phe	Gly	Ser	Glu	Ala	Lys	Ala	Gln	Gln	Gln	Glu	Glu	Gln	Gly	Ser	Val				
	530					535				540									
Asn	Asp	Val	Lys	Glu	Glu	Glu	Lys	Glu	Glu	Lys	Glu	Val	Leu	Pro	Asp				
545				550						555				560					
Gln	Val	Glu	Glu	Glu	Glu	Glu	Asn	Asp	Asp	Gln	Glu	Glu	Glu	Glu	Glu				
				565					570					575					
Asp	Glu	Asp	Asp	Glu	Asp	Asp	Glu	Glu	Glu	Asp	Arg	Met	Glu	Val	Gly				
			580					585				590							
Pro	Phe	Ser	Thr	Gly	Gln	Glu	Ser	Pro	Thr	Ala	Glu	Asn	Ala	Arg	Leu				
		595					600					605							
Leu	Ala	Gln	Lys	Arg	Gly	Ala	Leu	Gln	Gly	Ser	Ala	Trp	Gln	Val	Ser				
	610					615				620									
Ser	Glu	Asp	Val	Arg	Trp	Asp	Thr	Phe	Pro	Leu	Gly	Arg	Met	Pro	Gly				
625				630					635					640					
Gln	Thr	Glu	Asp	Pro	Ala	Glu	Leu	Met	Leu	Glu	Asn	Tyr	Asp	Thr	Met				
				645					650					655					
Tyr	Leu	Leu	Asp	Gln	Pro	Val	Leu	Glu	Gln	Arg	Leu	Glu	Pro	Ser	Thr				
			660					665					670						
Cys	Lys	Thr	Asp	Thr	Leu	Gly	Leu	Ser	Cys	Gly	Val	Gly	Ser	Gly	Asn				
		675					680					685							
Cys	Ser	Asn	Ser	Ser	Ser	Ser	Asn	Phe	Glu	Gly	Leu	Leu	Trp	Ser	Gln				
	690					695				700									
Gly	Gln	Leu	His	Gly	Leu	Lys	Thr	Gly	Leu	Gln	Leu	Phe							
705				710					</										

```
<210> 3167
<211> 2730
<212> DNA
<213> Homo sapiens
```

```
<400> 3167
nnggccggcg cctcctcctg gattcattca ctgcgtcttt tcattcacga aggtagttag
60
gcctagtgga aagccatgga gagcgctctc ccgcccggcg gcttcctgta ctgggtcggc
120
gcgggcaccg tggcctacct agccctgcgt atttcgtact cgctcttcac ggccctccgg
180
gtctggggag tggggaatga ggcgggggtc ggccggggc tcggagagtg ggcagttgtc
240
acaggtagta ctgatggaat tggaaaatca tatgcagaag agttagcaaa gcatggaatg
300
```

aagggttgccc ttatcagcag atcaaaggat aaacttgacc aggtttccag tgaaataaaa
360
gaaaaattca aagtggagac aagaaccatt gctgttgact ttgcatcaga agatatttat
420
gataaaatta aaacaggcctt ggctggctctt gaaatcggca tcttagtgaa caacgtggga
480
atgtcgtatg agtatcctga atactttttg gatgttcctg acttggacaa tgtgatcaag
540
aaaatgataa atattaatat tctttctgtt tgtaagatga cacaattggg actgcctggc
600
atgggtggaaa gatccaaagg ggctattctg aacatttcat ctggcagtgg catgctccct
660
gtcccactct tgaccatcta ttctgcaacc aagacttttg tagatttctt ctctcagtgc
720
ctccatgagg agtataggag caagggcgctc tttgtgcaga gtgtcctgcc atacttcgta
780
gctacaaaac tggctaaaat ccggaagcca actttggata agccctctcc ggagacgttt
840
gtgaagtctg caattaaaac agtcggcctg caatcccgaa ccaatggata cctgatccat
900
gctcttatgg gctcgataat ctcaaacctg ccttcttgga tttatttgaa aatagtcatg
960
aatatgaaca agtctacacg ggctcactat ctgaagaaaa ccaagaagaa ctaagcattg
1020
ataactgcat tgtaacttgg ccagatgctc cagcatatgc acgttcactg caaagcacc
1080
tactggtttt gaaaatctga ccttgtcatt tcaatagtta ttaacatgac taaatattat
1140
cttaattaag aggaaaatag aagttgcttt taggggtttc tgacatatat tctggatact
1200
atccgaggta attttgaagt ttaatatata tgctcatatc aaatgaatat agaactaata
1260
ttgtcgggaa cacctaatag aaaggaatac tattatagca aatcacagaa tgatagactc
1320
aagcataaaa cttggcagtt ttatctgctt caaaatgcc a ttgatcatta ttctgtatt
1380
ttctctgaaa ctgattataa aaaccaatgt ccagctactc ttttggtttt gacacttgaa
1440
gaaatggaga tcgatttgat ttgtttataa gcagacacac tgcaatttac aaagatctct
1500
ttacggtttt ataaaattat cttccagttt gtacatttat atggaattgt tctttatcaa
1560
gggtagctaa tgacatgaaa ataattgtga aatatggaat tatttctgac acatgaagcc
1620
cactaaacta tgctttctta taatgcatat ttcttctcag tttaaatgta tgtaaataac
1680
gaagctatat ggtatgattt ataaagataa atgggccaaa gtgtacattg agactggcag
1740
ccatctatgg taccactgaa accctgaccc agaaaagtgg cttgcttgga caccagctg
1800
cctttgtttc tgcattaaac caatattgat cacacatatg acacaggcta gtcctataaa
1860
agtaatgact tcatagaaat ggcattataa tttttaagtt gatactctac aggtagctat
1920

tgatataatt agttttaata aaacatgctg caaccatggt atacaacaaa aatacatttc
 1980
 tttggtgatt gaaattaagg ccgtatttac aatgacttaa tataagactg acttttatcc
 2040
 tgcttcataa cttgtatgga gaactcacca agaaagaatt caatactgtg aaatatgcag
 2100
 caagaagatt ggtctttacc taggctgtgt ttcctaagct ctgagttttc agcaccagta
 2160
 gatttgattt aaaagaaaaa aaaatggggc cttagcttct ggcttttaaat tttgccagct
 2220
 aaggacataa aacaaaaata aacaaacaaa aacaaatagc catctgctat cagcatcatt
 2280
 atgtaaaaga aaatatattt tagcccctaa aattaggaag aatgtaatct cagaataaag
 2340
 gttgtcattt aagttgaata aatatatagc tttatgaaaa acacattggt tgcccttttt
 2400
 tcctctcatt tcattgtaga aatgggtgaca ccacaatgac ctggacagta ttttatctgc
 2460
 tttcacacat tgggtgggta gttgggtggg tgggtgggtg gtgagttggg tttagtgtag
 2520
 tgggtggtaga tagaggaggg attctcttgc aagtatacaa aatactctct ttttctttta
 2580
 tcccagttag aaaatagttg taggctaagc acagtggctt acacctgtaa actcaatgct
 2640
 ttgggaggct gagacaggag gattgcttga gcccgaggag tcaacgccag cccgggcaac
 2700
 gtagcaagct cttgtctcta caaaaaaatt
 2730

<210> 3168

<211> 312

<212> PRT

<213> Homo sapiens

<400> 3168

Met	Glu	Ser	Ala	Leu	Pro	Ala	Ala	Gly	Phe	Leu	Tyr	Trp	Val	Gly	Ala
1				5				10						15	
Gly	Thr	Val	Ala	Tyr	Leu	Ala	Leu	Arg	Ile	Ser	Tyr	Ser	Leu	Phe	Thr
			20					25					30		
Ala	Leu	Arg	Val	Trp	Gly	Val	Gly	Asn	Glu	Ala	Gly	Val	Gly	Pro	Gly
		35					40					45			
Leu	Gly	Glu	Trp	Ala	Val	Val	Thr	Gly	Ser	Thr	Asp	Gly	Ile	Gly	Lys
	50					55					60				
Ser	Tyr	Ala	Glu	Glu	Leu	Ala	Lys	His	Gly	Met	Lys	Val	Val	Leu	Ile
65					70					75				80	
Ser	Arg	Ser	Lys	Asp	Lys	Leu	Asp	Gln	Val	Ser	Ser	Glu	Ile	Lys	Glu
			85					90						95	
Lys	Phe	Lys	Val	Glu	Thr	Arg	Thr	Ile	Ala	Val	Asp	Phe	Ala	Ser	Glu
			100					105					110		
Asp	Ile	Tyr	Asp	Lys	Ile	Lys	Thr	Gly	Leu	Ala	Gly	Leu	Glu	Ile	Gly
	115					120					125				
Ile	Leu	Val	Asn	Asn	Val	Gly	Met	Ser	Tyr	Glu	Tyr	Pro	Glu	Tyr	Phe
	130					135					140				
Leu	Asp	Val	Pro	Asp	Leu	Asp	Asn	Val	Ile	Lys	Lys	Met	Ile	Asn	Ile

145		150		155		160									
Asn	Ile	Leu	Ser	Val	Cys	Leu	Val	Leu	Pro	Gly	Met				
				165		170				175					
Val	Glu	Arg	Ser	Lys	Gly	Ala	Ile	Leu	Asn	Ile	Ser	Ser	Gly	Ser	Gly
				180				185					190		
Met	Leu	Pro	Val	Pro	Leu	Leu	Thr	Ile	Tyr	Ser	Ala	Thr	Lys	Thr	Phe
		195					200						205		
Val	Asp	Phe	Phe	Ser	Gln	Cys	Leu	His	Glu	Glu	Tyr	Arg	Ser	Lys	Gly
	210					215						220			
Val	Phe	Val	Gln	Ser	Val	Leu	Pro	Tyr	Phe	Val	Ala	Thr	Lys	Leu	Ala
225					230					235					240
Lys	Ile	Arg	Lys	Pro	Thr	Leu	Asp	Lys	Pro	Ser	Pro	Glu	Thr	Phe	Val
				245					250					255	
Lys	Ser	Ala	Ile	Lys	Thr	Val	Gly	Leu	Gln	Ser	Arg	Thr	Asn	Gly	Tyr
		260					265						270		
Leu	Ile	His	Ala	Leu	Met	Gly	Ser	Ile	Ile	Ser	Asn	Leu	Pro	Ser	Trp
		275				280						285			
Ile	Tyr	Leu	Lys	Ile	Val	Met	Asn	Met	Asn	Lys	Ser	Thr	Arg	Ala	His
	290					295					300				
Tyr	Leu	Lys	Lys	Thr	Lys	Lys	Asn								
305					310										

<210> 3169

<211> 5945

<212> DNA

<213> Homo sapiens

<400> 3169

```

nncggccgcc gcaagaaagt gtccttcgag gccagcgtgg ccctgctgga ggctcgcgtg
60
aggaacgacg ccgaggaagt acgctacttc ctgaagaata aggtcagccc tgatttgtgc
120
aatgaggacg gactcacagc cctacaccag tgctgcatcg acaactttga ggaaattgtg
180
aagctgctcc tctcccatgg tgccaatgtg aacgccaaagg acaacgagct gtggacacct
240
ctccatgctg cagccacctg cggccacatc aacctgggtga agatcctcgt tcagtatggg
300
gccgacttgc ttgctgtcaa ctcggtatggg aacatgccat atgacctctg cgaggatgaa
360
cccaccctgg atgtcatcga gacctgcatg gcataaccagg gcatcaccca agagaaaatc
420
aacgagatgc ggggtggctcc tgagcagcag atgattgcgg acatccactg catgatcgca
480
gcggggccagg acctggactg gatagatgcc caggggtgcca cactgctgca catagctgga
540
gccaatggat acctgcgggc agctgagctc ctccctggatc atggagtgcg tgtggatgtg
600
aaggactggg atggctggga gcccctgcat gcagctgcct tctggggaca gatgcagatg
660
gcagagctat tgggtgtcca tggagctagt ctcaagtcaa ggacatccat ggatgagatg
720
ccaatagacc tgtgcgagga ggaagagttc aaggctcctgc tgctggagct aaaacacaag
780

```

catgatgtga tcatgaagtc acagctgagg cacaagtcac ccttgagccg gaggacctcc
840
agcgcaggca gccgtgggaa ggtggtgcgg cgagccagcc tgtcggacag gaccaacctg
900
tataggaagg agtatgaggg agaggccatc ctgtggcagc ggagtgcagc tgaggatcag
960
cggacctcca cctacaacgg ggacatcagg gagaccagga cagaccaaga gaataaggac
1020
cctaacccca ggctggagaa gcccggtgcta ctctccgaat ttcctaccaa gatcccacga
1080
ggtgaactgg acatgcctgt tgagaatggc ctccgggctc cggtcagtgc ctaccagtat
1140
gcgctggcca acggggatgt ctggaagggtg catgagggtgc ctgactacag catggcctat
1200
ggcaaccctg gcgtggccga cgccaccccg ccctggagca gctacaagga acagagccct
1260
cagacgttc tggagctgaa gcggcagcgg gctgcagcca agctgctcag ccaccccttc
1320
cttagcacac acctgggcag cagcatggcc aggacgggcg agagtagcag tgaaggcaag
1380
gccnccttga tcggaggcag aacttcaccg tacagcagca atgggacctc ggtatattac
1440
acggtcacca gcggagatcc cccactctta aagttcaagg ccccataga ggagatggag
1500
gagaagggtgc atggctgttg ccgtatctcc tagtctccgt gtgatggagg agggagatgc
1560
ctggggaggg gctcctggaa tccaggccag cccaacaacc ctggctgggg aggtgtcagg
1620
gcagctgggg agaggtgggc tctgcttttc agaggaactc agaccccgag cctcagctgg
1680
ctgcccatag catcccatgt cccacgtccc gtggttctgc ttctgctgc atcgtctgcc
1740
atctgacaca aggcctgtcg tggcctcctg gttcactctg ctgtctgac ttgggagggt
1800
gggcttgaga tcccagctct attcttggt taaaggcttc tccggatcag tacatgcatg
1860
tcacattaac acacacacac acacacatat acacacacac acaagctcga tcagtgtgtg
1920
taggaatgac atacctgggc tcaggggaag caagggggct tagaatttgt ggggtattcc
1980
caaaaggatg gaagttaaga ctgagagtct cattaccact gccaatgtgg ttttagcagg
2040
ggaggggacc tgctaagctg agacccatag tctgctcag agttatccca aagtctgagc
2100
caccagccac acctgacagg ggtgagaagt cctcgctgtg ttcagaggga gccaggaatc
2160
tacatgggta gatgagatag acacagacct gctccccgca gccttggtga gagccacact
2220
tctgcccata ccaggagcca gctgtgtgac catccagggg tggaggggga aaaccaggca
2280
atttcgttcc tggaatcaac caaatcatgt tttcctcttg gatggaagt tcaaaggcag
2340
aagggtgtgg gagggggaca aggtcagtat ttaccaaagt gtatctgatt ttaaaaattc
2400

ctttagtctg taaaactcct agagggaggg aggtaactga attcacttct ttttgtggat
2460
cgtatcaagg tcaactgggtt ttactggctg gtgctgggaa aatgaagcta agtgaggagc
2520
ttccattgga atgcttttcc agggagagag gccagttaat ttaaaaaaaaa cagtcgctag
2580
ttaacagcga cagagcccag caccctgggg tctttgtgaa tatccagact gtttcagccc
2640
agcccatctc agccaaccct ccttagactg agctgtcaga gcaagcaatt aggggcccagc
2700
ctgcctccac ctcccacccc cttccacctc catcagtcac gtgtgcagag tcagtgtctg
2760
ggatcccggg ccagactttt gccttttttg ggatgcttgg tgagacagat ttgccagtca
2820
gcccttttga gttcccgctt caccagggg ctcccagcct gcacttgcag gagtgggtgag
2880
gcccgaagtc tgcaaatcca ggggtgcacgt ggtcaatata cctcctgca ttcaggagag
2940
ccatggtagg gctggagttg ggtcttgccc agccctgcag tttcatagtc ccagccttcc
3000
tggtgctggg gagggaggac tgtgaatggc tgttctcccc tcaactgctga gtctcccagg
3060
accccttttg gagatgccc tggcatgggc actgcccaca ggctcagcca gaacctcttg
3120
gtgtaccoga taagctgcag gttatccctt gctctgtgcg ccttttattt gtccttaaac
3180
tacctcetta gagctctgaa ggggtctcct agttccagat tttaatlttg ggaacagatc
3240
tggtttcttt ttaacctctt tctttctcag tctatgagaa acttgccctg aggggacact
3300
gggctagggg cttgggactg gaagaccatc cccgcttgtt gccacaactt tgggtcatggg
3360
atctgctctt tgtcattctt agccccctac tgtggcccc atagccccat aaccagaga
3420
gggagctgga cttcagggag cctgagtgat gctttcccag gagcagggca gctggctgga
3480
ccagaaagta gagggcccat gggagtgact gcacccttgg tggtgctgg aaagggagag
3540
gttctcagca tcaggccacc tccaccccaa tgccaggata gatgtattct agagtagggg
3600
tgtaggcggc ccaggaggct gaagacaggt gcacagatgc tccccacgac cttgccattt
3660
gggttgggct cttcaacatc tcaggctgtg gctggaacag gacaggatga tctaaaacac
3720
acgtaccatt ggctgtaaaa cagtatgagc ccagactgac gctgaaatcc ctcatgagcc
3780
aaccttagct acaaggtagg gagttctgag ggaagccgag tgctcctcag gagagagctg
3840
tttaggtttt ccgatctttt tgctcagggg ccaaactg aaggcacgta ctgccaacc
3900
cactgagcgc ctgaggccat tccctccttt tccgcatgcc tctgacctcc tgggctattc
3960
ctctccaccc agaaggctgg gaatcccagc tgattccctg acaggagccg acttcacaca
4020

caggtgactc tcaggcattg gctcatgttt tcagccaggg ataaaccatc ccttcttggg
4080
gctttaagtc cctggggagc tttccctgta ggtctcctgg gtgttgagag acaagttgga
4140
gaccaacctc caatgaatga gccgcggtca ttcattaatt cactcacgta atttactgag
4200
tagctgcaac atgccagcct ctacgttagg ttctgcggat aaaggaggaa taagacagag
4260
tcaggagAAC tgttccttgt ggtttccgtc ccttggggac cacaggcatc agcagtccca
4320
ttcaagtcac ctgaggcaaa gtgtctgcat cttcgtccag cgaccctttg cttttcggct
4380
cctagaatcc ttagagtctg aattccttta gctgggaaca gctgtcatgg tcacccttgg
4440
ataacatttg ccaccaagta tagatgctgg atcttgggtt ccaggcagac atcatccagg
4500
tccatctgga actttcagtg atagctgcct tcagccagca tctttggggg actctataat
4560
agcagcttga gatcagtgtc tagaagactg ttctgcaatt tgctgccaaa tgcattctcag
4620
gttttttaag tcattgtttc ttgctcatgg tggtcattt attacatagt cccctcaccc
4680
cactaatgga taatgggagg aaaagtgtct gcttccttca gcatcaaagc ctttccttgg
4740
gaatctgcct ccctccatgg caggggtgga ttcgggagct gggagtaacc aggcaaagtc
4800
aaccagatgc ctagctcctg ctgagacca ggtcctatgg cagctcctca ttagattaaa
4860
ggagaccact tccaaagcag gtgctgcatg gctcaccatc atatgcccc aacaactgaa
4920
agttggcggt tatcaccaga ctgtgagttt ctggcaagta gcttggggaa gctgaataaa
4980
ctctaggccc agggctacta aagacttcag gatagaattc tccatcaaat atacagcata
5040
agtaaaactg ctctgcactg ttaaatccat ttccaagggg cttagaaaag ctaacaaggg
5100
tgtgtccctt gtccctgccc accggtttgc tggctttgta ataacataag accattgtgg
5160
ttgttggtgt cagatacctt cccatcctga gctctctcac ctacctgtc tctctcctag
5220
agcaggatac tggggactt ttaagaaggg tgctcctttt aagatgcccc gaaaagctgt
5280
atttaactct tgctatttgt aacttgggga tggctcctcc tgccccaggg cacataagag
5340
caaaggctcc aatggtcagt ggatgactct gcaaaagtga cccctgtgc cagaagctat
5400
agccctctcc ccaacaggtc tctcttgttg gccagagggc ctgcttccca tgggcattgc
5460
aagtgccacc gtgcggggcc tggctctgca caccaggaa aagtctgcag acccccagcc
5520
ctccgcaata attcaccaga ccagaagcca ctggtgtaca gagaacactt aaaaaaatgt
5580
attttatgtg aaaaaaatt aaaactctgt atactgtatc agcagctttg tgtaaaaatg
5640

gcaatcaaga gagtctaata tattttaaacc ttttttaaaa aaaatcttcg cggatctttg
5700
atatcgtact gaggttaactt ccacgtagcc ccttgccacg cggcaccggt gggccttggg
5760
tccaaaactg tggctcagcc acatcccaaa gggggcacat gtccctggag ttgcttccag
5820
ctgccaaggc ctgtgacaga attcgtctgtt aagagttttt aattaaaatt attaaattcc
5880
ttttaataac aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
5940
aaaaaa
5945

<210> 3170
<211> 412
<212> PRT
<213> Homo sapiens

<400> 3170
Tyr Gly Ala Asp Leu Leu Ala Val Asn Ser Asp Gly Asn Met Pro Tyr
1 5 10 15
Asp Leu Cys Glu Asp Glu Pro Thr Leu Asp Val Ile Glu Thr Cys Met
20 25 30
Ala Tyr Gln Gly Ile Thr Gln Glu Lys Ile Asn Glu Met Arg Val Ala
35 40 45
Pro Glu Gln Gln Met Ile Ala Asp Ile His Cys Met Ile Ala Ala Gly
50 55 60
Gln Asp Leu Asp Trp Ile Asp Ala Gln Gly Ala Thr Leu Leu His Ile
65 70 75 80
Ala Gly Ala Asn Gly Tyr Leu Arg Ala Ala Glu Leu Leu Leu Asp His
85 90 95
Gly Val Arg Val Asp Val Lys Asp Trp Asp Gly Trp Glu Pro Leu His
100 105 110
Ala Ala Ala Phe Trp Gly Gln Met Gln Met Ala Glu Leu Leu Val Ser
115 120 125
His Gly Ala Ser Leu Ser Ala Arg Thr Ser Met Asp Glu Met Pro Ile
130 135 140
Asp Leu Cys Glu Glu Glu Glu Phe Lys Val Leu Leu Leu Glu Leu Lys
145 150 155 160
His Lys His Asp Val Ile Met Lys Ser Gln Leu Arg His Lys Ser Ser
165 170 175
Leu Ser Arg Arg Thr Ser Ser Ala Gly Ser Arg Gly Lys Val Val Arg
180 185 190
Arg Ala Ser Leu Ser Asp Arg Thr Asn Leu Tyr Arg Lys Glu Tyr Glu
195 200 205
Gly Glu Ala Ile Leu Trp Gln Arg Ser Ala Ala Glu Asp Gln Arg Thr
210 215 220
Ser Thr Tyr Asn Gly Asp Ile Arg Glu Thr Arg Thr Asp Gln Glu Asn
225 230 235 240
Lys Asp Pro Asn Pro Arg Leu Glu Lys Pro Val Leu Leu Ser Glu Phe
245 250 255
Pro Thr Lys Ile Pro Arg Gly Glu Leu Asp Met Pro Val Glu Asn Gly
260 265 270
Leu Arg Ala Pro Val Ser Ala Tyr Gln Tyr Ala Leu Ala Asn Gly Asp

275	280	285
Val Trp Lys Val His Glu Val Pro Asp Tyr Ser Met Ala Tyr Gly Asn		
290	295	300
Pro Gly Val Ala Asp Ala Thr Pro Pro Trp Ser Ser Tyr Lys Glu Gln		
305	310	315
Ser Pro Gln Thr Leu Leu Glu Leu Lys Arg Gln Arg Ala Ala Ala Lys		
325	330	335
Leu Leu Ser His Pro Phe Leu Ser Thr His Leu Gly Ser Ser Met Ala		
340	345	350
Arg Thr Gly Glu Ser Ser Ser Glu Gly Lys Ala Xaa Leu Ile Gly Gly		
355	360	365
Arg Thr Ser Pro Tyr Ser Ser Asn Gly Thr Ser Val Tyr Tyr Thr Val		
370	375	380
Thr Ser Gly Asp Pro Pro Leu Leu Lys Phe Lys Ala Pro Ile Glu Glu		
385	390	395
Met Glu Glu Lys Val His Gly Cys Cys Arg Ile Ser		400
405	410	

<210> 3171

<211> 753

<212> DNA

<213> Homo sapiens

<400> 3171

```

gaattctatt tattccttag tgttgactct agggccatgg aaggaaagga atgaggtacc
60
actcactgaa ttgggagggcg attacaattc tgttattctg atgctatttg ggaccttctt
120
tttcccttta cagggtcaac ggactgctgtg tgttactcca ccgtggggcac cagcgacgca
180
gaaacctcgg cgctgcatat cgttggttggg gactcgctgg ccatggatgt gtcctcagtc
240
caccacaaca gcacactcct tcgctactcc gtgtccctgc tgggctacgg cttctacggg
300
gacatcatca aggacagtga gaagaaacgg tgggttgggtc ttgccagata cgacttttca
360
ggtttaaaga ctttctctc ccaccactgc tatgaaggga cagtgtcctt cctccctgca
420
caacacacgg tgggatctcc aagggatagg aagccctgcc gggcaggatg ctttgtttgc
480
aggcaaagca agcagcagct ggaggaggag cagaagaaag cactgtatgg tttggaagct
540
gcggaggatg tggaggagtg gcaagtcgtc tgtgggaagt ttctggccat caatgccaca
600
aacatgtcct gtgcttgtcg ccggagcccc aggggcctct ccccggtcgc ccacttggga
660
gacgggtctt ctgacctcat cctcatccgg aaatgctcca ggttcaattt tctgagattt
720
ctcatctggc acgaagtctg caagaagcca ctt
753

```

<210> 3172

<211> 228

<212> PRT

<213> Homo sapiens

<400> 3172

```

Ile Gly Arg Arg Leu Gln Phe Cys Tyr Ser Asp Ala Ile Trp Asp Leu
 1           5           10           15
Leu Phe Pro Phe Thr Gly Ser Thr Asp Cys Val Cys Tyr Ser Thr Val
          20           25           30
Gly Thr Ser Asp Ala Glu Thr Ser Ala Leu His Ile Val Val Gly Asp
          35           40           45
Ser Leu Ala Met Asp Val Ser Ser Val His His Asn Ser Thr Leu Leu
          50           55           60
Arg Tyr Ser Val Ser Leu Gly Tyr Gly Phe Tyr Gly Asp Ile Ile
65           70           75           80
Lys Asp Ser Glu Lys Lys Arg Trp Leu Gly Leu Ala Arg Tyr Asp Phe
          85           90           95
Ser Gly Leu Lys Thr Phe Leu Ser His His Cys Tyr Glu Gly Thr Val
          100          105          110
Ser Phe Leu Pro Ala Gln His Thr Val Gly Ser Pro Arg Asp Arg Lys
          115          120          125
Pro Cys Arg Ala Gly Cys Phe Val Cys Arg Gln Ser Lys Gln Gln Leu
          130          135          140
Glu Glu Glu Gln Lys Lys Ala Leu Tyr Gly Leu Glu Ala Ala Glu Asp
145          150          155          160
Val Glu Glu Trp Gln Val Val Cys Gly Lys Phe Leu Ala Ile Asn Ala
          165          170          175
Thr Asn Met Ser Cys Ala Cys Arg Arg Ser Pro Arg Gly Leu Ser Pro
          180          185          190
Ala Ala His Leu Gly Asp Gly Ser Ser Asp Leu Ile Leu Ile Arg Lys
          195          200          205
Cys Ser Arg Phe Asn Phe Leu Arg Phe Leu Ile Trp His Glu Val Cys
          210          215          220
Lys Lys Pro Leu
225

```

<210> 3173

<211> 573

<212> DNA

<213> Homo sapiens

<400> 3173

```

nntgtacaga acaaggattc aactgctgcc cgaagagcat ggactcgatc ttaacttcaa
60
ctgctcaggg gccccaaaaa atgactgaaa aatgactaaa aagcataata aagttgatgt
120
tatagtgaag gtttgaaggt tgaagtgact cattgtggaa caatgagacg gaaataccgt
180
gtttgtaatg taacaaggag gcctgccagt catcaaacct ttcctttaca gttagaaaac
240
ggccaaactg tggagagaac agtagcgcag tatttcagag aaaagtatac tcttcagctg
300
aagtaccgcg accttccttg tctgcaagtc gggcaggaac agaaacacac ctacctgcca
360
ctagaagtct gtaatattgt ggcagggcaa cgatgtatca agaagctaac agacaatcag
420

```

acttccacta tgatcaaggc aacagcaaga tctgcaccag atagacaaga ggaaattagc
 480
 agattggtaa gaagtgcaaa ttatgaaaca gatccatttg ttcaggagtt tcaatttaaa
 540
 gttcgggatg aaatggctca tgtaactgga cgc
 573

<210> 3174
 <211> 152
 <212> PRT
 <213> Homo sapiens

<400> 3174
 Cys Tyr Ser Glu Gly Leu Lys Val Glu Val Thr His Cys Gly Thr Met
 1 5 10 15
 Arg Arg Lys Tyr Arg Val Cys Asn Val Thr Arg Arg Pro Ala Ser His
 20 25 30
 Gln Thr Phe Pro Leu Gln Leu Glu Asn Gly Gln Thr Val Glu Arg Thr
 35 40 45
 Val Ala Gln Tyr Phe Arg Glu Lys Tyr Thr Leu Gln Leu Lys Tyr Pro
 50 55 60
 His Leu Pro Cys Leu Gln Val Gly Gln Glu Gln Lys His Thr Tyr Leu
 65 70 75 80
 Pro Leu Glu Val Cys Asn Ile Val Ala Gly Gln Arg Cys Ile Lys Lys
 85 90 95
 Leu Thr Asp Asn Gln Thr Ser Thr Met Ile Lys Ala Thr Ala Arg Ser
 100 105 110
 Ala Pro Asp Arg Gln Glu Glu Ile Ser Arg Leu Val Arg Ser Ala Asn
 115 120 125
 Tyr Glu Thr Asp Pro Phe Val Gln Glu Phe Gln Phe Lys Val Arg Asp
 130 135 140
 Glu Met Ala His Val Thr Gly Arg
 145 150

<210> 3175
 <211> 948
 <212> DNA
 <213> Homo sapiens

<400> 3175
 nnnccccctc tcttcctcac gcgcagaact acaacttcag ggttttccca acggcctctt
 60
 tttgcacggt aggagaaact acatttcacca taatcctttg ttccaggggt ggagcggctc
 120
 tgggctccgg aatcgccgc agccggtact gcgggaccca ctgcggatat ggctgtcttg
 180
 gctggatccc tgttgggccc cacgagtagg tcggcagcgt tgctgggtgg caggtggctc
 240
 cageccccgg cctggctggg gttcccagac gcctggggcc tccccacccc gcagcaggcc
 300
 cggggcaagg ctgcgggaa tgagtatcag ccgagcaaca tcaaacgcaa gaacaagcac
 360
 ggctgggtcc ggcgcctgag cacgccggcc ggcgtgcagg tcatecttcg ccgaatgctc
 420

aagggccgca agtcgctgag ccattgagga tcgcgacgca gtcggcgggga ccctcatgga
480
agcatcgccc tcgcctcgga ccttgccctgg cgctattttt gcagggagct ggggagcagg
540
aacgcctcgg acctgagtgc tctccatatt gtgggggttga agtctggatg ggagcttgcc
600
aagtcctttt ttaggctttt taattaggaa gcatttcgaa cctgcgcaac agaccaaaga
660
acagtacaaa gaacatccgt gtaccagta ccctgactac cgactaccta caaccgctcc
720
ctgccccatc ctgagttctt ttgaagctga tctcaggcat cggattattt cttctgtaaa
780
tatttcagaa tgtatctctc caagatgaga gtcattaaa agataattac aaagcttatc
840
acatccaaaa gaattatcaa taattttgaa atattattaa acgtgtaata aatgttcaaa
900
gttccacttg caaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaa
948

<210> 3176
<211> 92
<212> PRT
<213> Homo sapiens

<400> 3176
Met Ala Val Leu Ala Gly Ser Leu Leu Gly Pro Thr Ser Arg Ser Ala
1 5 10 15
Ala Leu Leu Gly Gly Arg Trp Leu Gln Pro Arg Ala Trp Leu Gly Phe
20 25 30
Pro Asp Ala Trp Gly Leu Pro Thr Pro Gln Gln Ala Arg Gly Lys Ala
35 40 45
Arg Gly Asn Glu Tyr Gln Pro Ser Asn Ile Lys Arg Lys Asn Lys His
50 55 60
Gly Trp Val Arg Arg Leu Ser Thr Pro Ala Gly Val Gln Val Ile Leu
65 70 75 80
Arg Arg Met Leu Lys Gly Arg Lys Ser Leu Ser His
85 90

<210> 3177
<211> 1857
<212> DNA
<213> Homo sapiens

<400> 3177
nggatccagg acatcgaggg agccagcgcc aaggaccttt gcagcgcgtc ttcggttggtg
60
tccccgtctt ttgtaccaac aggggagaag ccatgtgagc aagtcagtt ccagcccaac
120
acagtgaaca ctttggcctg cccgctcctc tccaacctgg cgacccgact ctggctacgc
180
aacggggccc ccgtcaatgc ctcggcctcc tgccacgtgc taccactgg ggacctgctg
240
ctggtgggca cccaacagct gggggagttc cagtgcgtgt cactagagga gggcttccag
300

cagctggtag ccagctactg cccagaggtg gtggaggacg ggggtggcaga ccaaacagat
360
gaggggtggca gtgtaccctg cattatcagc acatcgctg tgagtgcacc agctgggtggc
420
aaggccagct ggggtgcaga caggctctac tggaaggagt tcctggtgat gtgcacgctc
480
tttgtgctgg ccgtgctgct cccagtttta ttcttgctct accggcacccg gaacagcatg
540
aaagtcttcc tgaagcaggg ggaatgtgcc agcgtgcacc ccaagacctg ccctgtggtg
600
ctgccccctg agaccgccc actcaacggc ctaggggccc ctagcacccc gctcgatcac
660
cgaggggtacc agtcctctg agacagcccc cggggggccc gagtcttcac tgagtcagag
720
aagaggccac tcagcatcca agacagcttc gtggaggat cccagtggtg cccccggccc
780
cggggtccgc ttggctcgga gatccgtgac tctgtggtgt gagagctgac ttccagagga
840
cgctgccctg gcttcagggg ctgtgaatgc tcggagaggg tcaactggac ctccccctccg
900
ctctgctctt cgtggaacac gaccgtggtg cccggccctt gggagccttg gagccagctg
960
gcctgctgct ctccagtcaa gtagcgaagc tcctaccacc cagacaccca aacagccgtg
1020
gccccagagg tcctggccaa atatgggggc ctgcctaggt tgggtggaaca gtgctcctta
1080
tgtaaactga gccctttgtt tagaaaacaa ttccaaatgt gaaactagaa tgagagggaa
1140
gagatagcat ggcattgcagc acacacggct gctccagttc atggcctccc aggggtgctg
1200
gggatgcac caaagtgggt gtctgagaca gagttggaaa ccctcaccaa ctggcctctt
1260
caccttccac attatcccg cgtccaccggc tgcctgtct cactgcagat tcaggaccag
1320
cttgggctgc gtgcgttctg ccttgccagt cagccgagga ttagttgtt gctgccgtcg
1380
tcccaccacc tcagggacca gagggctagg ttggcactgc ggccctcacc aggtcctggg
1440
ctcggaacca actcctggac ctttccagcc tgtatcaggc tgtggccaca cgagaggaca
1500
gcgcgagctc aggagagatt tcgtgacaat gtacgccttt ccctcagaat tcagggaaga
1560
gactgtcgcc tgccttcctc cgttgttgcg tgagaacccg tgtgcccctt cccaccatat
1620
ccacctcg cctatctttg aactcaaaca cgaggaaacta actgcaccct ggtcctctcc
1680
ccagtcccca gttcaccctc catccctcac ctctctccac tctaagggat atcaacactg
1740
cccagcacag gggccctgaa tttatgtggt ttttatacat tttttaataa gatgcacttt
1800
atgtcatttt ttaataaagt ctgaagaatt actgtttaaa aaaaaaaaaa aagtttt
1857

<210> 3178

<211> 273
 <212> PRT
 <213> Homo sapiens

<400> 3178

Xaa	Ile	Gln	Asp	Ile	Glu	Gly	Ala	Ser	Ala	Lys	Asp	Leu	Cys	Ser	Ala
1				5					10					15	
Ser	Ser	Val	Val	Ser	Pro	Ser	Phe	Val	Pro	Thr	Gly	Glu	Lys	Pro	Cys
		20						25					30		
Glu	Gln	Val	Gln	Phe	Gln	Pro	Asn	Thr	Val	Asn	Thr	Leu	Ala	Cys	Pro
		35					40					45			
Leu	Leu	Ser	Asn	Leu	Ala	Thr	Arg	Leu	Trp	Leu	Arg	Asn	Gly	Ala	Pro
	50					55				60					
Val	Asn	Ala	Ser	Ala	Ser	Cys	His	Val	Leu	Pro	Thr	Gly	Asp	Leu	Leu
65					70				75					80	
Leu	Val	Gly	Thr	Gln	Gln	Leu	Gly	Glu	Phe	Gln	Cys	Trp	Ser	Leu	Glu
			85					90					95		
Glu	Gly	Phe	Gln	Gln	Leu	Val	Ala	Ser	Tyr	Cys	Pro	Glu	Val	Val	Glu
			100				105						110		
Asp	Gly	Val	Ala	Asp	Gln	Thr	Asp	Glu	Gly	Gly	Ser	Val	Pro	Val	Ile
	115						120					125			
Ile	Ser	Thr	Ser	Arg	Val	Ser	Ala	Pro	Ala	Gly	Gly	Lys	Ala	Ser	Trp
	130					135					140				
Gly	Ala	Asp	Arg	Ser	Tyr	Trp	Lys	Glu	Phe	Leu	Val	Met	Cys	Thr	Leu
145					150				155						160
Phe	Val	Leu	Ala	Val	Leu	Leu	Pro	Val	Leu	Phe	Leu	Leu	Tyr	Arg	His
			165					170						175	
Arg	Asn	Ser	Met	Lys	Val	Phe	Leu	Lys	Gln	Gly	Glu	Cys	Ala	Ser	Val
		180						185					190		
His	Pro	Lys	Thr	Cys	Pro	Val	Val	Leu	Pro	Pro	Glu	Thr	Arg	Pro	Leu
	195						200					205			
Asn	Gly	Leu	Gly	Pro	Pro	Ser	Thr	Pro	Leu	Asp	His	Arg	Gly	Tyr	Gln
	210					215				220					
Ser	Leu	Ser	Asp	Ser	Pro	Pro	Gly	Ala	Arg	Val	Phe	Thr	Glu	Ser	Glu
225					230				235					240	
Lys	Arg	Pro	Leu	Ser	Ile	Gln	Asp	Ser	Phe	Val	Glu	Val	Ser	Pro	Val
			245					250					255		
Cys	Pro	Arg	Pro	Arg	Val	Arg	Leu	Gly	Ser	Glu	Ile	Arg	Asp	Ser	Val
		260					265						270		

Val

<210> 3179
 <211> 3447
 <212> DNA
 <213> Homo sapiens

<400> 3179

tttttttttt tttttttttt tttttttttt tttttttttt tttttttttg tctgttaaac
 60
 tgtttaatga atgcataaaa aggcagaaaa atatataaag ccaaaagctc ataataaaat
 120
 taaatcatga tacaaccacc acaggcaatt accatcaa atattcccat gatttacaaa
 180

tgtatcgctt atacagagga agttgcaaaa tcaactgccag tacagacaca tccagtctaa
240
ttaactatcg tctattcata caacagcaac aactgcagct cctgagacca cagaaggaca
300
cagtgagcag ctggtgactg agccagggtg gcctccgatc aataactgat cagagtaatg
360
agacttcgag aggaatgcct ataagaaatc tcaaaaggta tttgtttggg tgcagaaaca
420
aatgcaccct ccacatttgg attttctcta gaagaatctg tggccaaatc tcttatccaa
480
tggagggtact gagtggctgg atcagttacc atgcaagctc acgatgaatg agattgaatt
540
tggttctgtg tgcacactgg gctctgggga gggaggacac ccctgtgtgt tgctgctgcc
600
ttccgtgctg tctactgtat ctttcatgtg tctccaaatg gtacacgccc catgggatta
660
cagaacacag ctacagaatt aggatctcat ggtaacaatg aggaattagg ttactgtaga
720
actaaaatat gtttaatgaa attaaaatgc aatggaaaaa aaatcaggca acagaacatt
780
ctgatgaatt tacaggactg attatatccc acggcactga atgacaaaaca gttcttctcc
840
atacagtcgc aattagaggc atagaagtca tactgaatgc tgaatagaag aacactgaga
900
agagcagggt ataaatgaag gttttcacat aaaacagaaa aatagacaaa atcatcggtg
960
agaagctagc tttcgaaaac ctccctaaaa gtacacggca cggagaagtg ggggtactggg
1020
atgtcctggc tgctttctgc tttgggaact atccaagtgg cacatcacca tgtccagctt
1080
agggtgtctt tgaaacctta cttcctccac ataaaaagga aggaacgggt tccaaagcta
1140
atgtttccag gctctgcctc gtgacactca agtggcctca gatatgagca ctggcacaga
1200
gtgatgctgg agaggctact tagagagaag ctgccgggac aagcacacga caatcttggc
1260
cctaagtgtc caccatttcc tcatgtgacc ctgacattcc ggggaactgg gaaacctgtt
1320
ccttaaaggc aacaacagtc ctttctttcc tctcacaaca aaggagcatg ttctccgtga
1380
atgcactttt catttacggc tctcaaaaga atatgccttc tcaaggaatt ttaaatgcac
1440
ttttcttgaa tgtcagctcc cagcaacaca agcatgggtg ttgttagggc attcccgggc
1500
tcgggggagg ccgctccaac atgtggtacc agcggccatg tgccctcaag gggagggagg
1560
aagagcacag gagggtggga ggaggacaaa cagccccttt tatagggtca tgggggggct
1620
ccactcagag tctggcagga atctgccagg aaaacctcgt tctagatagg gagaagcaga
1680
actgtgtgtg gggcaggccg ccgtggctct gagagacagg gcccgggcct tccactgctc
1740
gtttgcacac ctcttcggcc tatcccaagg accttcctag catataaaaa caggggctct
1800

cctgatttgt aaacagaaca acaaataaaa ataaaaacaa aacaaaaaat tcctccatgg
1860
cagcccaccc aatgaatacc ccagatTTTT agggccattg cgggtctgta gctgggtgta
1920
gagagagtta agctttcatc tcccatgttt acaacacttt gtgataaaat agttgagtgg
1980
agcaatcaca tccccactgc gtgcgctccc ccgggatgcc tcacagctgc tctgtgatca
2040
cacgtgcaaa tgttattatt attatTTTT gcctttggca tcaaagggca agcctgttca
2100
ttaaaaaatc ttctatatc aacactccat agtgaaaaga atggatactt caaaattcct
2160
aaagcaatca tgtgaaaatt atttttatTT ttaaaatTT tgaaagtgtt ttgattttta
2220
tgggtccttg ataattggcc agccctgttt tgcaaagaga tggactatTT ctgagactag
2280
aatgttttct ttgaaaatat tgaagagtat aagagattta agacaataaa ggctgtaatc
2340
ttaccataaa ggaagaaaaa catctatgtg tgtcaatatt gttttgagat aaagtcacaa
2400
tgattgatat caatgcttT accatTTTat ttcaacttaa accagtgtca ctacatgaa
2460
gcttattTTa taatacatat tatccagtga tttcatcttt tctgcacagt ttaagtacat
2520
tttttttttT tgtaccttga agtaagcaga atagttcaag ctttcaaaac tggatgatgct
2580
gtatgcgtga gggatgctta cataatagca acgctttatt gggcaaccg aatccataca
2640
tgtctgggtg ggtttgatag ctgggcttga aaaagtgtt ccagttgaaa ttagcattag
2700
aaatcgggtta gaacaccaac atttcagggt gagggaggac tgctacaaag gaaaagaaca
2760
tgtctacaaa tgcactgaaa gaactagcca gaatatgaat tccattagta tctaagacac
2820
acaaaatgtc atttacaat aagtcacggc aagtgtcaca acctgaaatc tcaactcaga
2880
cagatggtag agatgttaac agttgcctga aacttcgatg tgctttcacg cccacaggaa
2940
aggtaaaaact gacatttTgt tttctcttca acaatttcat gatcaataaa gaattgcagt
3000
tgagactaa agcaaattct agaaaactcct taactccaag ttgccctatg gtttttatga
3060
ttgcatgtta tcagaatgag ggcgtctgtt ccacacttta ttcaaaagcc ttttacgctc
3120
ccacaaggcc ttctggaatt ccagaatcag ccctgcacac aggcagaaaa acagcttcat
3180
cttacagggt gtgtgagaac acccaataaa ctagggactt ttttgggaaa aacttcttTc
3240
tctccaaaat tacacaacca ccaaactc taaacatcac gtaaaatact gcatctgcaa
3300
tctgaatggc actcagggac cagcgcttTg atgaaccagc agccacaggT tctccactga
3360
caatcaactg cagaaaccac tcctagactc tggaccccat agcagagttt tttttttTg
3420

gttatacttt tttttccact tttgctt
3447

<210> 3180

<211> 127

<212> PRT

<213> Homo sapiens

<400> 3180

Met	Ser	Phe	Thr	Asn	Lys	Ser	Arg	Gln	Val	Ser	Gln	Pro	Glu	Ile	Ser
1				5				10						15	
Thr	Gln	Thr	Asp	Gly	Arg	Asp	Val	Asn	Ser	Cys	Leu	Lys	Leu	Arg	Cys
			20					25					30		
Ala	Phe	Thr	Pro	Thr	Gly	Lys	Val	Lys	Leu	Thr	Phe	Val	Phe	Leu	Phe
			35				40					45			
Asn	Asn	Phe	Met	Ile	Asn	Lys	Glu	Leu	Gln	Leu	Glu	Thr	Lys	Ala	Asn
	50					55					60				
Ser	Arg	Asn	Ser	Leu	Thr	Pro	Ser	Cys	Pro	Met	Val	Phe	Met	Ile	Ala
65					70				75					80	
Cys	Tyr	Gln	Asn	Glu	Ala	Leu	Cys	Ser	Thr	Leu	Tyr	Ser	Lys	Ala	Phe
				85					90					95	
Tyr	Ala	Pro	Thr	Arg	Pro	Ser	Gly	Ile	Pro	Glu	Ser	Ala	Leu	His	Thr
			100					105					110		
Gly	Arg	Lys	Thr	Ala	Ser	Ser	Tyr	Arg	Leu	Cys	Glu	Asn	Thr	Gln	
		115					120					125			

<210> 3181

<211> 287

<212> DNA

<213> Homo sapiens

<400> 3181

natggcttcc tccccggcgg tggacgtgtc ctgcaggcgg cggggagaac ggcggcagct
60
ggacgcgcgc cgcaacaagt gccgcattcg cctgggcggg cacatgaagc aggggggcct
120
cctcaaggac ggctgggctt ctccctgcac tcgcagctcg ccaagttcct gttggaccgg
180
tacatttctt caggctgtgt cctctgtgca ggtcctgagc ttttgctcc aaaaggtctg
240
cagtatctgg tgctcttggt tcatgccccca caccggagat gcaccct
287

<210> 3182

<211> 95

<212> PRT

<213> Homo sapiens

<400> 3182

Met	Ala	Ser	Ser	Pro	Ala	Val	Asp	Val	Ser	Cys	Arg	Arg	Arg	Gly	Glu
1				5					10					15	
Arg	Arg	Gln	Leu	Asp	Ala	Arg	Arg	Asn	Lys	Cys	Arg	Ile	Arg	Leu	Gly
			20					25					30		
Gly	His	Met	Lys	Gln	Gly	Gly	Leu	Leu	Lys	Asp	Gly	Trp	Ala	Ser	Pro

	35					40					45								
Cys	Thr	Arg	Ser	Ser	Pro	Ser	Ser	Cys	Trp	Thr	Gly	Thr	Leu	Leu	Gln				
	50					55					60								
Ala	Val	Ser	Ser	Val	Gln	Val	Leu	Ser	Phe	Cys	Leu	Gln	Lys	Val	Cys				
65					70					75					80				
Ser	Ile	Trp	Cys	Ser	Cys	Leu	Met	Pro	His	Thr	Gly	Asp	Ala	Pro					
				85					90					95					

<210> 3183

<211> 1457

<212> DNA

<213> Homo sapiens

<400> 3183

```

ncgtacgtgt catgcattgt catgacaccc tcattgtgtg tcgcatgtcc ccaattgatc
60
acacatatcc cacgtaatgc aggtactcc tttgtccaga ccagctcct ggttcccaaa
120
aaagttctcc ctgagagctg caggctgtcc tggaatctcc tcggggatga ggcagctgcc
180
gagctggccc aggtgctgcc gcagatgggc cggctgaaga gagtggacct ggagaagaat
240
cagatcacag ctttgggggc ctggctcctg gctgaaggac tggcccaggg gtctagcatc
300
caagtcaccc gcctctggaa taacccatt ccctgcgaca tggcccagca cctgaagagc
360
caggagccca ggctggactt tgccttcttt gacaaccagc ccagggcccc ttgggggtact
420
tgatggcccc ctcaagacct ttggaatcca gccaaagtat gcacccaaat gatccacctt
480
tcgcccactg ggataaatga ctcaggaaag aagagcctcg gcagggcgct ctgcactcca
540
cccaggagga aggatacgtg tgcctgctg cagtcctcag ggagaacttt tttgggaacc
600
aggagctggg tctggacaaa ggagtaccct gcattacgtg ggatatgtgt gatcaattgg
660
ggacatgcga cacacaatga ggggtgtcatg acaatgcatg acacgtacgg ttatatgtgg
720
cagtgtgacc ccttgacatg tggcgttaca tgaaagtcag tgtggcacgt gttctgtggc
780
atgggtgctg gcatcccaag tggcaggata catgattgtt ggtctatata tgacacatga
840
caaatgtcca tgtcacagga ctcatggctg gccagatgac ctcaggctgg cccaagatct
900
aattttattaa tttttaaagc aaatacatat ttatagattg tgtgtatgga gcagctaagt
960
caggaaaagt cttccgcccg agctgggagg ggagagtgtc catgcactga ccagtccagg
1020
ggctcaaggg ccagggtctt ggaacaagcc agggactcag ccattaagtc ccctcctgcc
1080
tcaatcctca gcctacccat ctataaactt gatgactcct cccttactta catactagct
1140
tccaaggaca ggtggaggta gggccagcct ggcgggagtg gagaagccca gtctgtccta
1200

```

tgtaagggac aaagccaggt ctaatggtac tgggtagggg gcactgccaa gacaataagc
 1260
 taggctactg ggtccagcta ctactttggt gggattcagg tgagtctcca tgcacttcac
 1320
 atgttaccca gtgttcttgt tacttccaag gagaaccaag aatggctctg tcacactcga
 1380
 agccaggttt gatcaataaa cacaatggta ttccaaaaaa aaaaaaaaaa aaaaaaaaaa
 1440
 aaaaaaaaaa aaaaaaa
 1457

<210> 3184

<211> 140

<212> PRT

<213> Homo sapiens

<400> 3184

Xaa	Tyr	Val	Ser	Cys	Ile	Val	Met	Thr	Pro	Ser	Leu	Cys	Val	Ala	Cys
1				5					10					15	
Pro	Gln	Leu	Ile	Thr	His	Ile	Pro	Arg	Asn	Ala	Gly	Tyr	Ser	Phe	Val
		20						25					30		
Gln	Thr	Gln	Leu	Leu	Val	Pro	Lys	Val	Leu	Pro	Glu	Ser	Cys	Arg	
		35					40					45			
Leu	Ser	Trp	Asn	Leu	Leu	Gly	Asp	Glu	Ala	Ala	Ala	Glu	Leu	Ala	Gln
50						55					60				
Val	Leu	Pro	Gln	Met	Gly	Arg	Leu	Lys	Arg	Val	Asp	Leu	Glu	Lys	Asn
65					70				75					80	
Gln	Ile	Thr	Ala	Leu	Gly	Ala	Trp	Leu	Leu	Ala	Glu	Gly	Leu	Ala	Gln
			85						90					95	
Gly	Ser	Ser	Ile	Gln	Val	Ile	Arg	Leu	Trp	Asn	Asn	Pro	Ile	Pro	Cys
			100					105					110		
Asp	Met	Ala	Gln	His	Leu	Lys	Ser	Gln	Glu	Pro	Arg	Leu	Asp	Phe	Ala
		115					120					125			
Phe	Phe	Asp	Asn	Gln	Pro	Gln	Ala	Pro	Trp	Gly	Thr				
		130				135					140				

<210> 3185

<211> 1433

<212> DNA

<213> Homo sapiens

<400> 3185

gccgcgtcga cttttttttt ttttttttct aattgcatca ctttatttca cgcacctcca
 60
 ctctggctcc caccacacaa gcctcagagc aggaacaag cttggctgag atgcctcagg
 120
 cctggtaacc tgaggaggtg tagagcacc cagaaggaagg gtaaaagcag ggggcaaagc
 180
 ggtggccctc cttttctggg ggtcacttct gggctggggc cagctgaaac ctgtgtccaa
 240
 gtagctttca gggctggcca caccctaagc cttgcaaaaag ggctcctgc aagggtggc
 300
 ccatggggtc cccaccttcc cagccagtga ggtagcatg gttaggagtc cacatgtgtg
 360

caagtgcttg tgtggaggct catgtatgca tgtgtgtata tgcaaagctg cacatgacaa
 420
 tgtgcatgcc agtccagagt tagatgtacc tatgcagttg ccctcaagcg aagggtcata
 480
 tttggaacaa aggatggctc taaacatgta agcgtgcatg tgggcatgta tgtatctggg
 540
 gcctaaggag gtggggaagt ggggtgttggg gtaagggtg gccttcaggg catttgcaga
 600
 aggaggagtg ggtgggaggg aaaggctggg cagagcaggg gaaggagtga aagccaggca
 660
 ggaaagtgga agaacaggag aagctcatgt aatggattac cctccacagg attatgttcc
 720
 ttgattcctg agagtttttt ctcttgattt taccctctca gtctatcact gcaagagaaa
 780
 gaggtagaaa agacaaacag accacaaaag acaagaaccc agacatatag acagacgcac
 840
 ctgttgcattg tgcattgagc agagcctggg agagaagaga gagcgtgcaa gagagagctc
 900
 agagcaggca ggcagccccc cccctgcagc agtgctgggc ttcactggag cccctgcagg
 960
 aagtccagca gccctgtatg ccaactcctt ggtttgtcca ggtaacaggg gtgccccgcc
 1020
 cccttcattg tcagcaccgc gtggttgggc agctgcttca ggtgctcaaa gctggtctga
 1080
 cccatggggc cctggtctcc atatacaatc agagctggag tctgagagga aggatagggg
 1140
 ggtggggcag agtcaacagg acctgccata gcatccccag ccctccccac ttcagtctct
 1200
 tcctgggacc accccatatg agggagagag acaagctggc ccagtgggtg ggggcacaga
 1260
 ttggtgtctg cccagaaca cagtttagca cagggtcttg cacagtagtc tgcagagtaa
 1320
 accaaaaggg tggagttggg tggtcagctc ctcccagaag acacccttg attatccagc
 1380
 cccagatga ggaaagccca ggatgcaccc ttccttgctc ctggcagggc acc
 1433

<210> 3186

<211> 112

<212> PRT

<213> Homo sapiens

<400> 3186

Met	Pro	Leu	Leu	Trp	Phe	Val	Gln	Val	Thr	Gly	Val	Pro	Arg	Pro	Leu
1				5					10					15	
His	Asp	Gln	His	Pro	Val	Val	Gly	Gln	Leu	Leu	Gln	Val	Leu	Lys	Ala
			20					25					30		
Gly	Leu	Thr	His	Gly	Val	Leu	Val	Ser	Ile	Tyr	Asn	Gln	Ser	Trp	Ser
		35					40					45			
Leu	Arg	Gly	Arg	Ile	Gly	Gly	Trp	Gly	Arg	Val	Asn	Arg	Thr	Cys	His
	50				55					60					
Ser	Ile	Pro	Ser	Pro	Pro	His	Phe	Ser	Leu	Phe	Leu	Gly	Pro	Pro	His
65				70					75					80	
Met	Arg	Glu	Arg	Asp	Lys	Leu	Ala	Gln	Trp	Val	Gly	Ala	Gln	Ile	Gly

	85		90		95										
Val	Cys	Pro	Arg	Thr	Gln	Phe	Ser	Thr	Gly	Leu	Gly	Thr	Val	Val	Cys
	100							105					110		

<210> 3187

<211> 860

<212> DNA

<213> Homo sapiens

<400> 3187

```

gggcccggag cagcctccct ttgggtccgct tctcgaagggt tcaattcaca gagcacttca
60
tatctaccag gagacggagt ttcgctatgt ttcccagact ggttttgaac tcctggccta
120
aagtgggtcct cccgcctcgg ctccttgagt agctgggatt acagatatgt tcctaaaaca
180
tccttgagtt caccaccttg gccagaagtt gttctgccag acccagttga ggagaccaga
240
caccatgcag aggtcgtgaa gaaggtgaat gagatgatcg tcacggggca gtatggcagg
300
ctcttttgcg tggtgcactt tgccagccgc cagtgggaagg tgacctctga agacctgatc
360
ttaattggaa atgaactaga ccttgctgtg ggagagagaa ttcgactgga gaaggtcctg
420
ctggttgggg cagacaactt cacgctgctt ggcaagccac tcctcgggta atggctgtga
480
agtgtctgggc tttgtctggg gctccagggc tggacatgca gacagtggtc acagtgcaat
540
taggccagaa aggatcttgt tcgagtagaa gccacagtca ttgaaaagac agaatcatgg
600
ccaagaatca ttatgagatt caggaaaagg aaaaacttca agaagaaaag aagtaagtta
660
gagaaagtac cgctgggccc tgttgccacg tgctggttgc ccaggcgcat gcggacggag
720
ggtgtggggc acgtgggtct cgggacagga agcccaggca ggtctcaacc tggctgccac
780
tgcccacttg ccaccctcat cctagaggga gcaccagag ggtccagcct cgctcccctt
840
ctcctccacg ctccacgcgt
860

```

<210> 3188

<211> 120

<212> PRT

<213> Homo sapiens

<400> 3188

Thr	Pro	Gly	Leu	Lys	Trp	Ser	Ser	Arg	Leu	Gly	Leu	Leu	Ser	Ser	Trp
1				5				10					15		
Asp	Tyr	Arg	Tyr	Val	Pro	Lys	Thr	Ser	Leu	Ser	Ser	Pro	Pro	Trp	Pro
		20					25					30			
Glu	Val	Val	Leu	Pro	Asp	Pro	Val	Glu	Glu	Thr	Arg	His	His	Ala	Glu
		35				40					45				
Val	Val	Lys	Lys	Val	Asn	Glu	Met	Ile	Val	Thr	Gly	Gln	Tyr	Gly	Arg


```

      50              55              60
Leu Phe Ala Val Val His Phe Ala Ser Arg Gln Trp Lys Val Thr Ser
65              70              75              80
Glu Asp Leu Ile Leu Ile Gly Asn Glu Leu Asp Leu Ala Cys Gly Glu
      85              90              95
Arg Ile Arg Leu Glu Lys Val Leu Leu Val Gly Ala Asp Asn Phe Thr
      100              105              110
Leu Leu Gly Lys Pro Leu Leu Gly
      115              120

```

<210> 3189

<211> 440

<212> DNA

<213> Homo sapiens

<400> 3189

```

nngggcccct aagggcatgg atggggccgg actctggcct ggctgtcaac aagagggctg
60
agcctgggga agcaagtccc tgttttcagt accacctgca tccccaggg cagcatcctt
120
gactcccctt ctgggccagt gctgccctgc tttctctgtc tctttcaggg tgtgctgtcc
180
gacctacca aagtgaccgg gatgcatgga atcgaccctg tgggtgctggt cctgatggtg
240
ggcatggtga tgttcaccct ggggttcgcc ggctgcgtgg gggctctgcg ggagaatata
300
tgcttgctca actttgtgag tggccacaga gacaagagtg ggatatgatg caatggggta
360
caggctctgc tgggcaggat tatatgttac ctggtcagag cagggtggcag ctcttaggag
420
cctcccctat ggcccctgcc
440

```

<210> 3190

<211> 111

<212> PRT

<213> Homo sapiens

<400> 3190

```

Gly His Gly Trp Gly Arg Thr Leu Ala Trp Leu Ser Thr Arg Gly Leu
1              5              10              15
Ser Leu Gly Lys Gln Val Pro Val Phe Ser Thr Thr Cys Ile Pro Gln
      20              25              30
Gly Ser Ile Leu Asp Ser Pro Ser Gly Pro Val Leu Pro Cys Phe Leu
      35              40              45
Cys Leu Phe Gln Gly Val Leu Ser Asp Leu Thr Lys Val Thr Arg Met
      50              55              60
His Gly Ile Asp Pro Val Val Leu Val Leu Met Val Gly Met Val Met
65              70              75              80
Phe Thr Leu Gly Phe Ala Gly Cys Val Gly Ala Leu Arg Glu Asn Ile
      85              90              95
Cys Leu Leu Asn Phe Val Ser Gly His Arg Asp Lys Ser Gly Ile
      100              105              110

```

<210> 3191
 <211> 266
 <212> DNA
 <213> Homo sapiens

<400> 3191
 cggaggccga cgggctgata gttccctgtt cegtgtccgc tacttgagcc atggaccggg
 60
 accttttgcg gcagtcgcta aattgccacg ggtcgtcttt gctctctcta ctteggagcg
 120
 aacagcagga caatccacac ttccgtagcc tcctgggggtc ggccgccgag ccagcccggg
 180
 gccgcgcgcc ccagcaccgc ttgcagggca gaaaagagaa gagagttgac aacatcgaga
 240
 tacagaaatt catctcccaa aaagcg
 266

<210> 3192
 <211> 84
 <212> PRT
 <213> Homo sapiens

<400> 3192
 Met Asn Phe Cys Ile Ser Met Leu Ser Thr Leu Phe Ser Phe Leu Pro
 1 5 10 15
 Cys Asn Gly Cys Trp Gly Gly Gly Pro Arg Ala Gly Ser Ala Ala Asp
 20 25 30
 Pro Arg Arg Leu Arg Lys Cys Gly Leu Ser Cys Cys Ser Leu Arg Ser
 35 40 45
 Arg Glu Ser Lys Asp Asp Pro Trp Gln Phe Ser Asp Cys Arg Lys Arg
 50 55 60
 Ser Arg Ser Met Ala Gln Val Ala Asp Thr Glu Gln Gly Thr Ile Ser
 65 70 75 80
 Pro Ser Ala Ser

<210> 3193
 <211> 567
 <212> DNA
 <213> Homo sapiens

<400> 3193
 nctgaccaca tctccgaccg cgttaaggta ccgaagccat ggtgggaaga gctggactcc
 60
 acagcctgcc tgagtgttca gatccaggct ctgccagag ctggatgtaa atttatgacc
 120
 tggagtgagt tgttttgccc ctctgagcct cagtttctcc atctgtgaaa tggggacaac
 180
 agcagttcct tccaggaggg taaaaggagg agaaaaagaa tgcagatcca gccctcggca
 240
 gagtcagcgg ttcattgcttt gcatgcaaag tgcccagccc ctgggtcaaa gtctgtgttc
 300
 atccagacct gggttaacta ctgtcttcct tatgttggtc ctgtggggac gcctggggct
 360

gctggcctcg tgattcctct ctttcctgc aggccacggt tcacctactt ccccttctcc
 420
 ctggggccacc gtccttgcac cgggcagcag tttgctcaga tggaggtgaa ggtgggtcatg
 480
 gcaaagctgc tgcagaggct ggagttccgg ctggtgcccc ggcagcgctt cgggctgcag
 540
 gagcaggcca cactcaagcc actggac
 567

<210> 3194

<211> 116

<212> PRT

<213> Homo sapiens

<400> 3194

Met	Gln	Ile	Gln	Pro	Ser	Ala	Glu	Ser	Ala	Val	His	Ala	Leu	His	Ala
1				5				10					15		
Lys	Cys	Pro	Ala	Pro	Gly	Ser	Lys	Ser	Val	Phe	Ile	Gln	Thr	Trp	Val
			20				25					30			
Asn	Tyr	Cys	Leu	Pro	Tyr	Val	Val	Pro	Val	Gly	Thr	Pro	Gly	Ala	Ala
		35				40				45					
Gly	Leu	Val	Ile	Pro	Leu	Phe	Pro	Cys	Arg	Pro	Arg	Phe	Thr	Tyr	Phe
	50				55			60							
Pro	Phe	Ser	Leu	Gly	His	Arg	Ser	Cys	Ile	Gly	Gln	Gln	Phe	Ala	Gln
65				70				75					80		
Met	Glu	Val	Lys	Val	Val	Met	Ala	Lys	Leu	Leu	Gln	Arg	Leu	Glu	Phe
			85					90					95		
Arg	Leu	Val	Pro	Gly	Gln	Arg	Phe	Gly	Leu	Gln	Glu	Gln	Ala	Thr	Leu
			100					105					110		
Lys	Pro	Leu	Asp												
			115												

<210> 3195

<211> 987

<212> DNA

<213> Homo sapiens

<400> 3195

cgatcgccca cctgatggag gaacctctag gcagtgaccc attcagctgg aaactcccaa
 60
 gcctcgacta cgaacgcaag accaaagtgg acttcgatga cttcctccca gctatccgga
 120
 agccccagac acctacctcc ttggctggat cagccaaagg tgggcaagac ggttcacagc
 180
 gttcaagcat ccactttgaa acggaagagg ctaaccgttc ctttctctcg gggatcaaga
 240
 ccattttgaa gaagagcccc gagcccaagg aggatcccgc tcacctgtct gactcgctct
 300
 catcctccgg ctccatcgtg tccttcaaaa gtgctgacag catcaaaagt cgaccaggaa
 360
 tcccacgact tgcgggtgac ggtggcgagc gaacgtcccc cgagcggaga gagccaggga
 420
 cggggaggaa agacgacgat gttgagagca taatgaagaa atacctccag aagtaggaac
 480

cagttcagcc tccttgaagc tgcccttgaa gacttcccga ctctacaata acttgagac
 540
 agagagactg gccaggcctc cccggtggcc agagccagcc agcatggcca ccctcaagag
 600
 gcgagatgag cccacagagg catatcctgc ggggatgctg ggctcccagt gtggttggcc
 660
 tgaacaaaat aaagtgttga ctcttgggca tctgtgcctt ctctatggcc ttgctacctg
 720
 ggattccaga gagttgatgg ggtgcagata ggggtaggac tgttagaata gaaccaaccc
 780
 aaactgtgtg tagtttgggg tgtatacttc tatttctctt cctacatgtc tacatgccat
 840
 gaccttccctc ctctcttcca cttggccagt ttcagctcac ttcctccagg aagtctttcc
 900
 tgatatatca aactgaaaca aatgctcctc ctccatgctc ccttaatccc catgcttgctc
 960
 gattatatcc ctttgccaat tcatttc
 987

<210> 3196
 <211> 153
 <212> PRT
 <213> Homo sapiens

<400> 3196
 Met Glu Glu Pro Leu Gly Ser Asp Pro Phe Ser Trp Lys Leu Pro Ser
 1 5 10 15
 Leu Asp Tyr Glu Arg Lys Thr Lys Val Asp Phe Asp Asp Phe Leu Pro
 20 25 30
 Ala Ile Arg Lys Pro Gln Thr Pro Thr Ser Leu Ala Gly Ser Ala Lys
 35 40 45
 Gly Gly Gln Asp Gly Ser Gln Arg Ser Ser Ile His Phe Glu Thr Glu
 50 55 60
 Glu Ala Asn Arg Ser Phe Leu Ser Gly Ile Lys Thr Ile Leu Lys Lys
 65 70 75 80
 Ser Pro Glu Pro Lys Glu Asp Pro Ala His Leu Ser Asp Ser Ser Ser
 85 90 95
 Ser Ser Gly Ser Ile Val Ser Phe Lys Ser Ala Asp Ser Ile Lys Ser
 100 105 110
 Arg Pro Gly Ile Pro Arg Leu Ala Gly Asp Gly Gly Glu Arg Thr Ser
 115 120 125
 Pro Glu Arg Arg Glu Pro Gly Thr Gly Arg Lys Asp Asp Asp Val Ala
 130 135 140
 Ser Ile Met Lys Lys Tyr Leu Gln Lys
 145 150

<210> 3197
 <211> 5575
 <212> DNA
 <213> Homo sapiens

<400> 3197
 nnacttgaac ccaggagggtg gaggttgcag tgagcggaga ttgtgccact gcacttggac
 60

ctggctgaca cagcaagact atgttttaaaa aaaaagagag agaaaaaaaa acaagaagga
120
agagcaatgg cgacactgga tcgcaaagtg cccagtccgg aggcgtttct gggcaaacc
180
tggtcctcct ggatcgacgc cgccaaatta cactgctccg acaatgtaga tttagaagag
240
gctggaaaag aggggtggaaa aagcagggag gttatgaggc ttaataaaga agatatgcac
300
ttatttggcc attaccacgc acatgacgac ttctatctcg tagtgtgcag tgcctgtaac
360
caggctgtca agccacaggt tttccagtcg cactgcgaga gaagacacgg ttcaatgtgt
420
agaccttctc cctctccagt gtctccagcc tccaatccca ggacatcact agtacagggtg
480
aaaacaaaag cctgtctcag cggccatcac tctgccagca gcacctcaaa gccattcaaa
540
acgccccaaag acaatctact tacctccagc agcaaacagc acacagtctt tcctgcgaaa
600
ggatcaaggg ataaaccatg tgttccagtt cctgtagtca gtttagagaa aattcctaac
660
ctagtgaagg cagatgggtg caatgtcaaa atgaactcca caaccactac tgcagtttct
720
gcctccccc cctcgtctc tgccgtctcc acccctcctt taattaagcc tgtcctgatg
780
tccaagtcag tgccaccttc accagagaag atcttaaag gcaaaggaat tctgccaacc
840
accatagaca agaaacacca aaatggcacc aaaaacagca acaagcctta caggagactt
900
tcagagagag aatttgaccc aaataaacac tgtggagtat tggatcccga gacaaagaaa
960
ccttgcacaa gatccctcac ctgcaagaca cattcgctaa gccatcggag ggcagtccca
1020
ggccggaaaa agcaatttga cctcctcctg gcagaacaca aagcaaagtc ccgggaaaaa
1080
gaagttaaag ataaagagca tctcctgact tccacgaggg aaataacttc aagccaatcc
1140
gggccggcac aggattctct gctaggggtc tcagggagct ctgggccaga accaaaagtt
1200
gcatccctg caaaatccag accaccaac tctgtacttc ctagaccatc atctgcaaat
1260
agcataagca gcagcacatc ttcaaatac agcggccaca ctccagagcc ccactccca
1320
cgggttgag gtgacctgc cagccgactg tccagtgatg aaggggagat ggacggagcc
1380
gacgaatccg agaagctaga ctgtcagttc tccacgcacc accccagacc tctggcgttt
1440
tgctcatttg ggagtcgcct catgggacga gggtagtatg tgtttgatag aagatgggat
1500
cgttttcgat tcgcactaaa ctccatggta gaaaaacacc tgaattcaca gatgtggaag
1560
aagatccctc ctgcggcaga tagcccatg ccctcgccag cagccacat caccaccccc
1620
gttccagcat ccgttttgca gcctttcagc aacccagtg ctgtgtatct tccttcagct
1680

cccatcagct cgagactcac ctcttcttac ataatgacat cagccatgct ctcagacgca
1740
gctttcgtga catcgccgga cccgagcgcc ctcatgtccc acaccacagc tttccctcat
1800
gtggccgcaa ccctcagcat catggactca accttcaagg ccccatccgc cgtgtccccc
1860
ataccagccg tcatcccttc cccatcccac aagccatcca aaaccaaacc cagcaaatcc
1920
tcaaaagtca aagacctgtc cacccgtagc gacgagtctc caagtaacaa aaaaaggaag
1980
ccacagtctt cgacttcttc ctctctctcc tctctctctt cttccttgca gacatccctc
2040
tcgtctccac tgtcagggcc tcacaaaaag aactgtgttt tgaatgccag ttctgctttg
2100
aactcctatc aggcggcccc tccctataac agcctgtctg tgcacaactc aaacaatggg
2160
gtgagcccac tcagtgccaa actggagccc tcaggacgga cctcgctgcc cggcggcccc
2220
gcggacatag tgagacaggt gggcgcggtg ggaggcagca gtgactcctg tcccctctct
2280
gtgccctccc ttgcgctcca cgcaggggac ctctctctgg cctcacacaa tgctgtgtct
2340
tctctgcccc tctcttttga caaatcagaa ggaaaaaagc gtaagaactc gagttctagt
2400
agcaaaagcct gtaaaatcac taaaatgcct ggtatgaata gcgttcacaa aaagaacccg
2460
cccagccttc tcgcaccggt gcccgatccc gttaacagca cctcctctcg gcagggtggg
2520
aaaaatagca gcctagcttt gtcacaatcc agtccttcaa gtatatccag cccaggacac
2580
agccgacaga acacaaacag aacgggcagg ataaggactc ttccataaca agactatgaa
2640
gccatttcca catcaattcc aggccaccta atcccatccg aggaggccat ggggaggagg
2700
agggaggggga gtgggctggg gggagagtct gttttctgtg cactccctgt gactctggcc
2760
tttcttcttc tttttttaat tgaccaattt ttagttaaaa aggcaaaaga aggtgaattt
2820
gagatttaca gaaaacagtt ccagtgtttg gtttccgctg tctttccttt catttgccat
2880
gtttttacat tcttccaaat ttggggtcac tcccctagct cctgatgctg ctactgtacc
2940
atccttttgc tccagccatg agagcagaca ttgcagaatg ttggttccag gttggcatgc
3000
tctgaagctc ttgaactgta gcacaggcag agcccttttt ctctctgtca tctccaccgc
3060
attccttcca tccctacgtc taccactctc tgggtcctca ctgggtcttca aaggacctgg
3120
ctctcatagg atccccctcag gattgtgtgc agggagaggg ggctttgctg gggaggagct
3180
gggagtggag agttggaggg tgggtggggg tccctcatcc agtttccaca gccaccatg
3240
gctggagcca aatgctagaa gcgagattga gaacagtggc cgtttagtga tgtggtttac
3300

ctaataccac tgtccagctg tgcagctcag aaaggataaa ccagtcaggg acaggggcca
3360
gaacagggttt gggaagggtgg cagcaagcag agcatgggtgg gtaggagatg atccctaaaa
3420
aaactggaga ctgtgggtgg ctgagctggg caggaatctg cagaatccct tccaggaatc
3480
agtgtgccag tgcccacagc aggggtgagct aggagggaga aatcccagga aaaagggtcgt
3540
gagaacccag aaagccactc catgaggagg cacggtgacc acagctgcta aagggttctta
3600
ggctgccttc ctgggctagg aagagccccc caggagagagc ttccacaaaa gggtatgtgt
3660
caaaccctttt gtcagaataa ataatagcat tccccacca ccccatgcc ctgggccaca
3720
gggacttggg gggatcagca ccccatgga tcagcttttg ctgtcttaga gacagccatc
3780
cccatgaagg aatggtaagg acagccactg ctcagtgaag aacagccatt tggaagagcc
3840
acgctggagc cctgcagcca tagaactatt cacactggag ttttaaaaga aacagcaata
3900
ccataagctc tagtagggaa tcataatcag gaaaggaatt cacaacataa aatagggtgtt
3960
ctgtgctatt aatcatgtaa ctttgtatat gatgtatagc aaagatactg ggagggtttg
4020
tttcatcctt aaatcagaaa tgaatgctag tttcatagct gggcagaacc ctcatcccca
4080
cccaaagtt ttccttttct ttcctgttcc cccaacccaa agatcagact actgttaagt
4140
ttcaccacac aattggaatt gcaaagacgg gaggcaaagtg gagtgatttt catcaatgga
4200
attgcactga cagtgagtgt ttcttatagg attactaaat tttttaatat aaaatgattt
4260
gtttaaaaaat caggagttaga tattaagtac caggacatta gttcggatga tttcattttt
4320
atttctacag tgttaaaagt gcacttatat gctgggtttat ttacgtcttg ggaaaagaga
4380
ctgcaaattg aagggatgat tgttactttt tcttttttta aaaaaaaaaag gttaaggaga
4440
ttttaagact tataaatggt taagaaatta taaacaagggt tagacccttt gaaaaaaagt
4500
ttagaagata ttcttaaagt aaatttttat agtggttaatt ttgtaataat ttatgtttta
4560
ctatattaca gagctaactg accagaatag tttcagaaac aatatgaaac ttaggaaagt
4620
ttaagcaatg tttatatattt taaaatgttc tttgaattat gtttttattg tacatttctt
4680
cagactgaaa agtatgtaca tatctttggt atttttgcac aattttgtct tgttcggttt
4740
cagagggtctg ttgtttttta taattttatt tgagttgtaa aacttgcagg agtaaaaaa
4800
aaaaacaaaa tctccacaac aaaataaccc tctgatttat aaactcttat agtcaaagag
4860
ggaaaacaaa ggttgagaga ttaagtggct gcttctgaga aataatgtct caaggactaa
4920

aggagcaatt caatagggtt agacattgta gctctctaca tcttgaattg gaagctggaa
 4980
 taaagagccc ccaccccccc cccaccctca tcgaatgctg cttactttgt caaaagactg
 5040
 gctatgacca aggtgaggat atttctggaa aactgggcaa aaagggaaag cccacagtat
 5100
 tcttccttgg cagtcaacca cagggttact ttacaatgat gtattaaaaa cttgcagctt
 5160
 gaaaaaatgga atgcaaataa aaggttctct ttgggtttgt cttaatggag ttaaactgga
 5220
 gcagcctata aaacattttt agggatgatgt cctctgggtc cttctgttct gcacaccac
 5280
 tcagtcttct ctcccagccc cttgactgca cacaccctc tttgcctgaa gatctcctga
 5340
 cttgtcgcca gccatagagg ctcgaaagct ctgggttgga agcataacgc aatgcataga
 5400
 cctgtcagcc ataaaaaaaa aaaaaaaaaa aaaaaaaaaa gcgacttgga taacttgtat
 5460
 gccttctttt gtatcaatgt accaattgta aataatgctg atcaaccttt gtagagaata
 5520
 gtttatacag catattctat tattgctgat tctcagttaa ctcttgtaa tatac
 5575

<210> 3198

<211> 833

<212> PRT

<213> Homo sapiens

<400> 3198

Met	Ala	Thr	Leu	Asp	Arg	Lys	Val	Pro	Ser	Pro	Glu	Ala	Phe	Leu	Gly
1				5					10					15	
Lys	Pro	Trp	Ser	Ser	Trp	Ile	Asp	Ala	Ala	Lys	Leu	His	Cys	Ser	Asp
			20					25					30		
Asn	Val	Asp	Leu	Glu	Glu	Ala	Gly	Lys	Glu	Gly	Gly	Lys	Ser	Arg	Glu
		35					40					45			
Val	Met	Arg	Leu	Asn	Lys	Glu	Asp	Met	His	Leu	Phe	Gly	His	Tyr	Pro
	50				55						60				
Ala	His	Asp	Asp	Phe	Tyr	Leu	Val	Val	Cys	Ser	Ala	Cys	Asn	Gln	Val
65					70					75				80	
Val	Lys	Pro	Gln	Val	Phe	Gln	Ser	His	Cys	Glu	Arg	Arg	His	Gly	Ser
			85						90					95	
Met	Cys	Arg	Pro	Ser	Pro	Ser	Pro	Val	Ser	Pro	Ala	Ser	Asn	Pro	Arg
			100					105					110		
Thr	Ser	Leu	Val	Gln	Val	Lys	Thr	Lys	Ala	Cys	Leu	Ser	Gly	His	His
		115				120						125			
Ser	Ala	Ser	Ser	Thr	Ser	Lys	Pro	Phe	Lys	Thr	Pro	Lys	Asp	Asn	Leu
	130					135					140				
Leu	Thr	Ser	Ser	Ser	Lys	Gln	His	Thr	Val	Phe	Pro	Ala	Lys	Gly	Ser
145					150					155				160	
Arg	Asp	Lys	Pro	Cys	Val	Pro	Val	Pro	Val	Val	Ser	Leu	Glu	Lys	Ile
			165					170						175	
Pro	Asn	Leu	Val	Lys	Ala	Asp	Gly	Ala	Asn	Val	Lys	Met	Asn	Ser	Thr
		180						185					190		
Thr	Thr	Thr	Ala	Val	Ser	Ala	Ser	Pro	Thr	Ser	Ser	Ser	Ala	Val	Ser

2411

```

625          630          635          640
Pro Leu Ser Gly Pro His Lys Lys Asn Cys Val Leu Asn Ala Ser Ser
          645          650          655
Ala Leu Asn Ser Tyr Gln Ala Ala Pro Pro Tyr Asn Ser Leu Ser Val
          660          665          670
His Asn Ser Asn Asn Gly Val Ser Pro Leu Ser Ala Lys Leu Glu Pro
          675          680          685
Ser Gly Arg Thr Ser Leu Pro Gly Gly Pro Ala Asp Ile Val Arg Gln
          690          695          700
Val Gly Ala Val Gly Gly Ser Ser Asp Ser Cys Pro Leu Ser Val Pro
705          710          715          720
Ser Leu Ala Leu His Ala Gly Asp Leu Ser Leu Ala Ser His Asn Ala
          725          730          735
Val Ser Ser Leu Pro Leu Ser Phe Asp Lys Ser Glu Gly Lys Lys Arg
          740          745          750
Lys Asn Ser Ser Ser Ser Ser Lys Ala Cys Lys Ile Thr Lys Met Pro
          755          760          765
Gly Met Asn Ser Val His Lys Lys Asn Pro Pro Ser Leu Leu Ala Pro
          770          775          780
Val Pro Asp Pro Val Asn Ser Thr Ser Ser Arg Gln Val Gly Lys Asn
785          790          795          800
Ser Ser Leu Ala Leu Ser Gln Ser Ser Pro Ser Ser Ile Ser Ser Pro
          805          810          815
Gly His Ser Arg Gln Asn Thr Asn Arg Thr Gly Arg Ile Arg Thr Leu
          820          825          830
Pro

```

```

<210> 3199
<211> 777
<212> DNA
<213> Homo sapiens

```

```

<400> 3199
acgcgtgagg tccggccact gcgcagtcag acacgccggc tgctgcagtg gggcagggcag
60
ctccaggtgc tggtgagggc cccagctctc tgcgaggctg tggctggacc aggcatacag
120
caagcagctc ccacagctgg cactggggaa cgtggtgaca cccagaagct tggagatgcc
180
aggaaccgca agggcccaaa gagagtgtca cagccctggc ttagggagct cctaggtctg
240
ggctgcccga agagcaaggg ctcttccttc cttctttctt ttctccttct tgctacctgc
300
aacatggcga gcaaggggca tgtctcagcc ctgtttgtga tacagctctt ttagccctgc
360
catccagtgg gtcttgagtt cttgtccggc aaccaggaag aatgaggtac ccagacaagt
420
gtagagtgac caagacaaag aggagcttta ctgagtgaca atagctcaga ggaggccctg
480
gagagggcag ttcctcacta cagctgggtca tccgacgtct gctcagctct ggctgagcct
540
ggggcttctg tcagcctcag agagggggaa gttcatgctg actggtccat gggcggccat
600

```

gggcaggccc agaaaaggca acacaagttc gcactccagt ccacggcact gacagcctgg
 660
 cccccagcct tcagggcctc cctggcctga aggtgggcct caccagggac tcacccccctt
 720
 ctgcccagaa acctgtctgc ctctgtctgc cattcatggc gcccaggcta taggtat
 777

<210> 3200

<211> 92

<212> PRT

<213> Homo sapiens

<400> 3200

Met	Leu	Gln	Val	Ala	Arg	Arg	Arg	Lys	Glu	Arg	Arg	Lys	Glu	Glu	Pro
1				5				10					15		
Leu	Leu	Phe	Gly	Gln	Pro	Arg	Pro	Arg	Ser	Ser	Leu	Ser	Gln	Gly	Cys
			20					25					30		
Asp	Thr	Leu	Phe	Gly	Ala	Leu	Arg	Phe	Leu	Ala	Ser	Pro	Ser	Phe	Trp
			35				40					45			
Val	Ser	Pro	Arg	Ser	Pro	Val	Pro	Ala	Val	Gly	Ala	Ala	Cys	Cys	Met
			50				55				60				
Pro	Gly	Pro	Ala	Thr	Ala	Ser	Gln	Arg	Ala	Gly	Ala	Leu	Thr	Ser	Thr
65					70					75				80	
Trp	Ser	Cys	Leu	Pro	His	Cys	Ser	Ser	Arg	Arg	Val				
				85					90						

<210> 3201

<211> 390

<212> DNA

<213> Homo sapiens

<400> 3201

acacgcgcag tgcgtctcct actgaacccg agcccctgct atgggtacgc ggaagcagct
 60
 cccgtcgcgc ctgccccagg ctggacggaa gggccacgct gcagccgggg tgagcacagc
 120
 gaagccgaca gcctttggga ccgaggtcag cagctgcacc ggcgcaagaa ttccaaacac
 180
 agctgtggct gaagggcctg ggggtgtgca ggtcccaaac ccagtgagc ctgatcccga
 240
 catgggtcct gtctcctggg ggccaccttt gtgtcccgtg gtggctgacc ctgagaggga
 300
 gggctgtggg gatgctcaca tgacactggg gtcccagcga cagcccctcc tcacgtgcg
 360
 tgtccctggg gcctctcagg agggacgcgt
 390

<210> 3202

<211> 116

<212> PRT

<213> Homo sapiens

<400> 3202

Met Gly Thr Arg Lys Gln Leu Pro Ser Arg Leu Pro Gln Ala Gly Arg

1	5	10	15
Lys Gly His Ala Ala Ala Gly Val Ser Thr Ala Lys Pro Thr Ala Phe			
	20	25	30
Gly Thr Glu Val Ser Ser Cys Thr Gly Ala Arg Ile Pro Asn Thr Ala			
	35	40	45
Val Ala Glu Gly Pro Gly Gly Val Gln Val Pro Asn Pro Ser Glu Pro			
	50	55	60
Asp Pro Asp Met Gly Pro Val Ser Trp Gly Pro Pro Leu Cys Pro Val			
65	70	75	80
Val Ala Asp Pro Glu Arg Glu Gly Cys Gly Asp Ala His Met Thr Leu			
	85	90	95
Gly Ser Gln Arg Gln Pro Leu Leu Thr Leu Arg Val Pro Gly Ala Ser			
	100	105	110
Gln Glu Gly Arg			
115			

<210> 3203

<211> 1906

<212> DNA

<213> Homo sapiens

<400> 3203

```

ngaattcggc acgagctcgt gccgaatcgg caccgagcgcg ggcccaggag cggcaggact
60
cgggccggag cgtggccgga cccccacccg ccgagggggcc cagggaggac gcggcagagt
120
cacggtggca gcattgagag ttggacaccc gggtccttga agtgatctct agggcccagc
180
cccaaattcc ccaccattcc gtgctgcggg gacaccatgg ctccagaaga ggacgctgga
240
ggggaggcct tagggggcag tttctgggag gctggcaact acaggcgcac ggtacagcgg
300
gtggaggacg ggcaccggct gtgcggggac ctggtcagct gcttccagga gcgcgcccgc
360
atcgagaagg cttatgccc gacgttggt gactggggccc gaaagtggag ggggaccgtg
420
gagaagggcc ccagtatgg cactctggag aaggcctggc atgccttttt cacggcggct
480
gagcggctga gcgcgctgca cctggaggtg cgggagaagc tgcaagggca ggacagttag
540
cgggtgcgcg cctggcagcg gggggctttc caccggcctg tgctgggcgg cttccgcgag
600
agccggggcg ccgaggacgg ctcccgcaag gcccagaagc cctggctgaa gaggctgaag
660
gagggttagg cttccaagaa aagctaccac gcagcccgga aggatgagaa gaccgcccag
720
acgagggaga gccacgcaaa ggcagacagc gccgtctccc aggagcagct gcgcaaactg
780
caggaacggg tggaacgctg tgccaaggag gccgagaaga caaaagctca gtatgagcag
840
acgctggcag agctgcatcg ctacactcca cgctacatgg aggacatgga acaggccttt
900
gagacctgcc aggccgccga gcgccagcgg cttcttttct tcaaggatat gctgctcacc
960

```

ttacaccagc acctggacct ttccagcagt gagaagttcc atgaactcca ccgtgacttg
 1020
 caccagggca ttgaggcagc cagtgcagaa gaggatctgc gctgggtggcg cagcaccac
 1080
 gggccaggca tggccatgaa ctggccacag ttcgaggagt ggtccttgga cacacagagg
 1140
 acaatcagcc ggaaagagaa ggggtggccg agccctgatg aggttaccct gaccagcatt
 1200
 gtgcctacaa gagatggcac cgcaccccca cccagtcctc cggggctccc aggcacgggg
 1260
 caggatgagg agtggtcaga tgaagagagt ccccggaagg ctgccaccgg ggttcgggtg
 1320
 agggcactct atgactacgc tggccaggaa gctgatgagc tgagcttccg agcaggggag
 1380
 gagctgctga agatgagtga ggaggacgag cagggctggt gccaaaggcca gttgcagagt
 1440
 ggccgcattg gcctgtaccc tgccaactac gtggagtgtg tgggcgcctg agtgtcctga
 1500
 cagcccttct gcaacgttta cccaccctgg ttcagagccc agcttctcct ggagagccgg
 1560
 accctcaggg ccctgaaccg tcgctctctg gctgctcctc tgcccttga gggaggaagt
 1620
 cctgggaccc agggagggga ggggcctttg tctaggggaag ggactggtag ggaagggacg
 1680
 agtctaggct gagggcaaga tgggaggtca gaggtgacag aagcgttcag ggggtgcctgg
 1740
 gcctccccag gagctgtgga ctcaagttcct gacctctgct ttgggggttcc tgggggtgggc
 1800
 ttgggggtgag tgtagttctg gcctagcagc accctcttgt ggcttggtct agcgtgtatt
 1860
 aaaacttgac acacacccac acacaaaaac aaaaacacca aaaaaa
 1906

<210> 3204

<211> 424

<212> PRT

<213> Homo sapiens

<400> 3204

Met	Ala	Pro	Glu	Glu	Asp	Ala	Gly	Gly	Glu	Ala	Leu	Gly	Gly	Ser	Phe
1				5					10					15	
Trp	Glu	Ala	Gly	Asn	Tyr	Arg	Arg	Thr	Val	Gln	Arg	Val	Glu	Asp	Gly
			20					25					30		
His	Arg	Leu	Cys	Gly	Asp	Leu	Val	Ser	Cys	Phe	Gln	Glu	Arg	Ala	Arg
		35				40					45				
Ile	Glu	Lys	Ala	Tyr	Ala	Gln	Gln	Leu	Ala	Asp	Trp	Ala	Arg	Lys	Trp
	50					55				60					
Arg	Gly	Thr	Val	Glu	Lys	Gly	Pro	Gln	Tyr	Gly	Thr	Leu	Glu	Lys	Ala
65					70				75				80		
Trp	His	Ala	Phe	Phe	Thr	Ala	Ala	Glu	Arg	Leu	Ser	Ala	Leu	His	Leu
			85					90					95		
Glu	Val	Arg	Glu	Lys	Leu	Gln	Gly	Gln	Asp	Ser	Glu	Arg	Val	Arg	Ala
			100					105					110		
Trp	Gln	Arg	Gly	Ala	Phe	His	Arg	Pro	Val	Leu	Gly	Gly	Phe	Arg	Glu

115	120	125
Ser Arg Ala Ala Glu Asp Gly Phe Arg Lys Ala Gln Lys Pro Trp Leu		
130	135	140
Lys Arg Leu Lys Glu Val Glu Ala Ser Lys Lys Ser Tyr His Ala Ala		
145	150	155
Arg Lys Asp Glu Lys Thr Ala Gln Thr Arg Glu Ser His Ala Lys Ala		
165	170	175
Asp Ser Ala Val Ser Gln Glu Gln Leu Arg Lys Leu Gln Glu Arg Val		
180	185	190
Glu Arg Cys Ala Lys Glu Ala Glu Lys Thr Lys Ala Gln Tyr Glu Gln		
195	200	205
Thr Leu Ala Glu Leu His Arg Tyr Thr Pro Arg Tyr Met Glu Asp Met		
210	215	220
Glu Gln Ala Phe Glu Thr Cys Gln Ala Ala Glu Arg Gln Arg Leu Leu		
225	230	235
Phe Phe Lys Asp Met Leu Leu Thr Leu His Gln His Leu Asp Leu Ser		
245	250	255
Ser Ser Glu Lys Phe His Glu Leu His Arg Asp Leu His Gln Gly Ile		
260	265	270
Glu Ala Ala Ser Asp Glu Glu Asp Leu Arg Trp Trp Arg Ser Thr His		
275	280	285
Gly Pro Gly Met Ala Met Asn Trp Pro Gln Phe Glu Glu Trp Ser Leu		
290	295	300
Asp Thr Gln Arg Thr Ile Ser Arg Lys Glu Lys Gly Gly Arg Ser Pro		
305	310	315
Asp Glu Val Thr Leu Thr Ser Ile Val Pro Thr Arg Asp Gly Thr Ala		
325	330	335
Pro Pro Pro Gln Ser Pro Gly Ser Pro Gly Thr Gly Gln Asp Glu Glu		
340	345	350
Trp Ser Asp Glu Glu Ser Pro Arg Lys Ala Ala Thr Gly Val Arg Val		
355	360	365
Arg Ala Leu Tyr Asp Tyr Ala Gly Gln Glu Ala Asp Glu Leu Ser Phe		
370	375	380
Arg Ala Gly Glu Glu Leu Leu Lys Met Ser Glu Glu Asp Glu Gln Gly		
385	390	395
Trp Cys Gln Gly Gln Leu Gln Ser Gly Arg Ile Gly Leu Tyr Pro Ala		
405	410	415
Asn Tyr Val Glu Cys Val Gly Ala		
420		

<210> 3205

<211> 1482

<212> DNA

<213> Homo sapiens

<400> 3205

```

nnggagatgg agggaaacctc cccgagcagc ccaccacca gtggggtgcg gtcccccccg
60
ggctctggcca agacaccctt atctgctctg ggcctgaaac ctcacaacctc agcggacatc
120
ctgttgccacc ccacaggaga gccccggagc tatgtggagt ctgtggcacg gacagcggtg
180
gctggacccc gagctcagga ctctgagccc aagagcttta gtgctccagc caccaggcc
240

```

tatggccatg agatacccct gaggaacggg accctgggtg gtcctttgt ctccccagc
 300
 cccctctcca ccagcagccc catcctcagt gctgacagca cttcagtggg gagtttcccg
 360
 tcgggagaga gcagtgacca ggggtccccg acgcccaccc agcctctgtt ggagtctggc
 420
 ttccgctcag gcagcctggg acagcccagc ccgtctgccc agagaaacta ccagagctct
 480
 tctcctctcc cgactgtggg cagtagctac agcagccccg actactcact tcagcatttc
 540
 agctcctctc cggaagcca ggctcgagct cagttcagtg tggctggcgt ccacacggtg
 600
 cctgggagcc ctgaggcgcg tcacagaaca gtgggcacca aactcccc tagtctggc
 660
 ttcggtggc gggccatcaa tcccagcatg gctgccccca gcagtcccag tttgagccat
 720
 caccagatga tgggtccacc aggcactggc ttccatggta gcactgtctc cagccccag
 780
 agcagtgcag cgaccacccc ggggagcccc agcctgtgtc ggcaccagc aggggtctac
 840
 caggtttctg gcctccaca caaagtggc accaccccgg ggagtcccag cctgggcccg
 900
 caccctgggg ctaccaagg caacctggc tccggtcttc atagcaatgc aatagccagc
 960
 cctggaagcc ccagcctggg ccgtcacctc ggagggtctg gatctgtggt tcccggcagc
 1020
 ccctgcttgg accggcatgt ggcctatggc ggctattcta ccccgaggga tcggagacc
 1080
 acactgtccc ggcagagcag tgcctctggc taccaggctc cttccacgcc ctcttccct
 1140
 gtctcccctg cctactaccc tggcctgagc agcctgcca cctccccgtc accagactcc
 1200
 gcagccttcc ggcaagggag cccaacacca gccttgccag agaagcgaag gatgtcagt
 1260
 ggagaccggg caggcagcct cccaactat gccaccatca atgggaaggt gtcttcgcct
 1320
 gtcgccagcg gcatgtccag tcccagtggg ggcagcacg tctccttctc ccacactctg
 1380
 cccgacttct ccaagtactc catgccagac aacagcccgg agacgcgggc taaagtgaag
 1440
 tttgtccagg acacttctaa gtattggtac aagcctaaga tc
 1482

<210> 3206

<211> 494

<212> PRT

<213> Homo sapiens

<400> 3206

Xaa	Glu	Met	Glu	Gly	Thr	Ser	Pro	Ser	Ser	Pro	Pro	Pro	Ser	Gly	Val
1				5					10					15	
Arg	Ser	Pro	Pro	Gly	Leu	Ala	Lys	Thr	Pro	Leu	Ser	Ala	Leu	Gly	Leu
			20					25					30		
Lys	Pro	His	Asn	Pro	Ala	Asp	Ile	Leu	Leu	His	Pro	Thr	Gly	Glu	Pro

2418

<400> 3209

tgttcctcta ggtggggcag gtagggggc cagcttcctg cttgctggtg gttcaggtca
 60
 tgcgtccagc cttgtccctt ctgacctggg ccctaccac ggggaaatgt tcccatagca
 120
 gaagaatcag cccacagtg caggggtgtg ttagtgggga acgggctctg ggctcctgtg
 180
 ggaaccaggg accccctatc ttggtaccgg tcattggatg tatccccagc tcatgctgtg
 240
 gtctgtcttg gcccggtgtg tcaccctgtg ttcattcttc tcccagccat ggcctctcaa
 300
 actgggggtt tegtctccct atgagggggg cctgggtatgt acgcgt
 346

<210> 3210

<211> 95

<212> PRT

<213> Homo sapiens

<400> 3210

Met	Arg	Pro	Ala	Leu	Ser	Leu	Leu	Thr	Trp	Ala	Leu	Pro	Thr	Gly	Lys
1				5					10					15	
Cys	Ser	His	Ser	Arg	Arg	Ile	Ser	Pro	Thr	Val	Gln	Gly	Cys	Val	Ser
			20					25					30		
Gly	Glu	Arg	Ala	Leu	Gly	Ser	Cys	Gly	Asn	Gln	Gly	Pro	Pro	Ile	Leu
		35				40					45				
Val	Pro	Val	Ile	Gly	Cys	Ile	Pro	Ser	Ser	Cys	Leu	Cys	Leu	Ser	Trp
	50				55					60					
Pro	Val	Trp	Ser	Pro	Cys	Val	His	Leu	Ser	Pro	Ser	His	Gly	Leu	Ser
65				70					75					80	
Asn	Trp	Gly	Phe	Arg	Leu	Pro	Met	Arg	Gly	Ser	Trp	Tyr	Val	Arg	
			85					90						95	

<210> 3211

<211> 1728

<212> DNA

<213> Homo sapiens

<400> 3211

tccggaaata taaagttgag ctaccagttt tcagaaatcc atgaagactc taccgtctgc
 60
 tggacaaaag attccaagtc gatageccag gccaaagaaa gcgcagggga caactccagt
 120
 gtttccttgg ccacgtgca agccagtcgg aaggaccagg gactctatta ctgctgcatc
 180
 aagaacagct acggaaaagt gactgctgaa tttaacctca cagctgaagt tctcaaacag
 240
 ctgtcaagtc acacagaata ctaaaggatg tgaagagatt gaattcagcc aactcatctt
 300
 caaagaagac ttcctccatg acagctactt tggggggccgc ctgcgtgggc agatcgccac
 360
 ggaggagctg cactttggag aaggggttca ccgcaaagcc ttccgcagca cagtgatgca
 420

cggcctcatg cctgtcttca aacctggcca tgcctgtgtg ctttaaggtgc acaatgccat
480
tgcctatggg accagaaata atgatgagct catccaaagg aactacaaac tcgctgcccc
540
ggaatgctat gttcaaaata ctgccaggta ttatgccaaag atctacgctg ctgaagcaca
600
gcctctggaa ggctttggag aagtacctga gatcattcct atttttctta tccatcgggc
660
tgagaacaat atcccgtatg ctacagtggg ggaggagctg attggagaat ttgtgaagta
720
ttccatcagg gatgggaaag aaataaactt cttgagaaga gaatcagaag ctggtcagaa
780
atgttgcacc ttccagcact ggggtgtacca gaaaacaagt ggctgcctcc tgggtgacgga
840
catgcaaggt gtaggaatga agctaactga cgttggcata gcaacgctgg ctaaagggtg
900
caagggattt aaaggcaact gttccatgac cttcattgat cagtttaaag cactacacca
960
gtgtaacaag tattgcaaaa tgctgggact gaaatccctt caaaacaaca accagaaaca
1020
gaagcagccg agcattggga aaagcaaagt tcaaacaaac tctatgacag taaagaaggc
1080
agggcctgag accccaggcg aaaagaaaac ctaacgtccc cgggtaacct aatggccact
1140
ggctagcagc acacaatctc gccagggaaa atctgaggcc acacaggaga gaatatacag
1200
cctgcagaga gtgcgtggca atccttactc ccagccgact gtgcgccaag atgcttctaa
1260
acccatcacc tgctgtcttc actcaaata tttcagaaca ggatttgcca ccagggttat
1320
ggggagattg aatcaacgat tgggtctcaa gacagtccat tctttatata catgttttagc
1380
atttttacca acctcacatc atgtgtatat ttgtgtatatt gcacatgggt gtgctgtcga
1440
ggacctgggt ctgagaagag tctgttcaca gccaaaattc tccccactgt cattcctaac
1500
ctgggatttc tagacacatc ctgctgtgat gtaaacagaa atcacgaatt cgctcactgg
1560
atcaagttgt tccactgggt tctaatacgc tattgttgcc ggagggtgggt tctgtgacgt
1620
gaagccattt cccatcattc aacagccagt tacaattttc tgtttaatta aattcatatt
1680
taaacaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
1728

<210> 3212

<211> 87

<212> PRT

<213> Homo sapiens

<400> 3212

Ser	Gly	Asn	Ile	Lys	Leu	Ser	Tyr	Gln	Phe	Ser	Glu	Ile	His	Glu	Asp
1				5				10				15			
Ser	Thr	Val	Cys	Trp	Thr	Lys	Asp	Ser	Lys	Ser	Ile	Ala	Gln	Ala	Lys

```

      20      25      30
Lys Ser Ala Gly Asp Asn Ser Ser Val Ser Leu Ala Ile Val Gln Ala
      35      40      45
Ser Pro Lys Asp Gln Gly Leu Tyr Tyr Cys Cys Ile Lys Asn Ser Tyr
      50      55      60
Gly Lys Val Thr Ala Glu Phe Asn Leu Thr Ala Glu Val Leu Lys Gln
      65      70      75      80
Leu Ser Ser His Thr Glu Tyr
      85

```

<210> 3213
 <211> 348
 <212> DNA
 <213> Homo sapiens

```

<400> 3213
acgcgtgaag gggaagcggc ggggtagtaa cagattatgg gcaacagtcc ttttaattaa
60
tctaccgtca tcatggctaa tgaggactgt cccaaggctg ctgatagtc ttttcatca
120
gataaacatg cccaactcat cttggcccaa atcaataaga tgagaaatgg acagcatttc
180
tgtgatgtgc agctgcaagt tggacaggaa agtttttaaag ctcacggct ggttttggct
240
gccagcagtc cttactttgc agctttgttc actggaggaa tgaaagagtc ctcaaaagat
300
gttgtagcga ttctaggaat tgaagcagga atctttcaga tacttcta
348

```

<210> 3214
 <211> 92
 <212> PRT
 <213> Homo sapiens

```

<400> 3214
Met Ala Asn Glu Asp Cys Pro Lys Ala Ala Asp Ser Pro Phe Ser Ser
1      5      10      15
Asp Lys His Ala Gln Leu Ile Leu Ala Gln Ile Asn Lys Met Arg Asn
      20      25      30
Gly Gln His Phe Cys Asp Val Gln Leu Gln Val Gly Gln Glu Ser Phe
      35      40      45
Lys Ala His Arg Leu Val Leu Ala Ala Ser Ser Pro Tyr Phe Ala Ala
      50      55      60
Leu Phe Thr Gly Gly Met Lys Glu Ser Ser Lys Asp Val Val Pro Ile
      65      70      75      80
Leu Gly Ile Glu Ala Gly Ile Phe Gln Ile Leu Leu
      85      90

```

<210> 3215
 <211> 597
 <212> DNA
 <213> Homo sapiens

<400> 3215

acgcgtgcgc gctcccgcca ggagagggcc agccggcccc ggcttaccat cttgaacgtg
 60
 tgcaacactg gggacaagat ggtggagtgc cagctggaga cgcacaacca caagatgggtg
 120
 accttcaagt tcgacttgga cggggacgca cccgatgaaa ttgccacgta tatgggtggag
 180
 catgacttta tcctgcaggc cgagcgggaa acgttcacgc agcagatgaa ggatgtcatg
 240
 gacaaggcag aggacatgct cagcaggagc acagacgccg accgtggctc cgacccaggg
 300
 accagccccg cacacctcag cacctgcggc ctgggcaccg gggaggagag ccgacaatcc
 360
 caagccaacg ccccggtgta tcagcagaac gtcctgcaca ccgggaagag gtgggttcac
 420
 atctgtccgg tgctgagcc ccccgcccc gagggccctt gaatcttcgc cccacttcc
 480
 tctaagctcc ctgccgccag aagccagcca agattcagcg ccctataaag accagctgtc
 540
 ctcgaaggaa caaccagct ttctagccag tcagcagctc ctgggccagg cgggccc
 597

<210> 3216

<211> 153

<212> PRT

<213> Homo sapiens

<400> 3216

Thr	Arg	Ala	Arg	Ser	Arg	Gln	Glu	Arg	Ala	Ser	Arg	Pro	Arg	Leu	Thr
1				5					10					15	
Ile	Leu	Asn	Val	Cys	Asn	Thr	Gly	Asp	Lys	Met	Val	Glu	Cys	Gln	Leu
			20					25					30		
Glu	Thr	His	Asn	His	Lys	Met	Val	Thr	Phe	Lys	Phe	Asp	Leu	Asp	Gly
		35					40					45			
Asp	Ala	Pro	Asp	Glu	Ile	Ala	Thr	Tyr	Met	Val	Glu	His	Asp	Phe	Ile
	50					55					60				
Leu	Gln	Ala	Glu	Arg	Glu	Thr	Phe	Ile	Glu	Gln	Met	Lys	Asp	Val	Met
65					70					75				80	
Asp	Lys	Ala	Glu	Asp	Met	Leu	Ser	Glu	Asp	Thr	Asp	Ala	Asp	Arg	Gly
			85						90					95	
Ser	Asp	Pro	Gly	Thr	Ser	Pro	Pro	His	Leu	Ser	Thr	Cys	Gly	Leu	Gly
		100						105					110		
Thr	Gly	Glu	Glu	Ser	Arg	Gln	Ser	Gln	Ala	Asn	Ala	Pro	Val	Tyr	Gln
	115					120						125			
Gln	Asn	Val	Leu	His	Thr	Gly	Lys	Arg	Trp	Phe	Ile	Ile	Cys	Pro	Val
	130					135					140				
Pro	Glu	Pro	Pro	Ala	Pro	Glu	Gly	Pro							
145					150										

<210> 3217

<211> 2570

<212> DNA

<213> Homo sapiens

<400> 3217

ggggtcaaag ctgcgcagta cccttgggggt gttgtacaag tggaaaatga aaaccactgt
60
gactttgtaa agctgcggga aatgctcatt tgtacaaata tggaggacct gcgagagcag
120
accatacca ggcactatga gctttacagg cgctgcaaac tggaggaaat gggctttaca
180
gatgtggggc cagaaaacaa gccagtcagt gttcaagaga cctatgaagc caaaagacat
240
gagttccatg gtgaacgtca gaggaaggaa gaagaaatga aacagatggt tgtgcagcga
300
gtaaaggaga aagaagccat attgaaagaa gctgagagag agctacaggc caaatttgag
360
caccttaaga gacttcacca agaagagaga atgaagcttg aagaacaaag aagacttttg
420
gaagaagaaa taattgcttt ctctaaaaag aaagctacct ccgagatatt tcacagccag
480
tcctttctgg caacaggcag caacctgagt aaggacaagg accataagaa ctccaatttt
540
ttgtaaaaca gaagttccag agcacagaag gtcacatca caagcaaact ttattaaaaa
600
aaaactagaa gtgtgctttg attttgctgt tatttgtttt atcacttcta tatttggtga
660
acagccacag ttactgatat ttatggaaaa gtactttcaa gtacaaggtc aatacataag
720
ccagagtga tgatactaca agttgagcat ctctaattca aaaatctgaa atccagaagc
780
ttcaaaatct gaatcttttt gagcactgac ttgacccac aagtggaaaa ttccccaccc
840
gacacctttg ctttctgatg gttcagttta aacagatttt gtttcttgca caaaattttt
900
gtataaatta ctttcaggct atatgtataa ggtggatgtg aaacatgaat tatgtaatta
960
gagtcgggtc ccgttggtga tatgcagata ttccaaacct gaaatccaaa acacttctgg
1020
tccttagcat tttggataag ggatactcag cttgtacctata tatattcata tatattcact
1080
gttgtagaa atgtttaagt tgctgttctg tgatgaatct aaatcttttc tcttgctacc
1140
aagctattgt cactgcagtg cattatacca aagagcgaag tcagtgccac tgaaaataca
1200
gaaccatta atatcgtggc tatctgatta catttatatt ccaagatgaa ccttttttta
1260
tatatgctaa aaattttggg gaatatgttt tgggatgtat tatggagcta aaactctaac
1320
ctcttaatag ttttatagaa cttaaaaaatt ttttatataa ttaccaat ggtgatatga
1380
tcttaagctt ttgtgtcaga ttatttaata tgatgacttc atgctttatt atgccttatt
1440
atggctgacg tattactgtg gtgaaacaaa atatctttaa aagttaaaac atccagatat
1500
ataagctatt ttttcctaag gataaagtac ctttgagcat gagtgtatca cagctttcat
1560
taggaaaact tttcattaca tacttgttta aactctgtct tccagggtaa aaataataag
1620

gttgaatcat tttattaaaa atacttttta agaaaataac tatgaacatc tgaatattaa
 1680
 agatataaaa atgcacataa ttcataatttc aggtggtatt tgcattcagt gccttactgg
 1740
 tattctcaga acattttaat gattttctaac atttcttaac agtcatagat atatacattt
 1800
 tcatttttttg tacttgaata ttctaaataa aactgacatt tactcttgac aaataaaaca
 1860
 tatatttact aaaaaaaaaa aaaaaaaacc tcgtgccgaa ttcggagagt ctaggaatac
 1920
 tgttaaagga aaaaaaagag gggggaagat caggtcatac tatctactct cctcatctct
 1980
 aacagctcag gatctcttag cattttaatt agatgtaatt gtttgtcttt aactgtcaaa
 2040
 aagtttgggt ctgtgtctgt gttttaataa gacgagagga cgagcgattg aggtgtatgg
 2100
 agagaaaaca gacctaatgc tccttggtcc tagagtagag tggagggagg gtggcctaag
 2160
 agttgagctc tcggaactgc atgctgctgg acagtatcac tgtctttcct agatggcagt
 2220
 cactgaattc cattttttca aggtaatttc ttgtgcctct aatagcccaa gaatgggagg
 2280
 ttgatcagat ctgacatgat tccttctgt tctgaactgt ggggtgtgca catctctgct
 2340
 tgagtcaggt ttgagtagag gcttagagac agttgggtga gaacaaccaa aatcttatca
 2400
 tgggtctcagt cataatcatt agggggaact ctagccaaat ggtttaactt ctgctgtgg
 2460
 aactgggggat tgggtgggca ggaaaagggtg atatccattc tttctgataa ctagatgggtg
 2520
 ctgagaagct tttgaataaa aactttgcta aatgaaaaaa aaaaaaaaaa
 2570

<210> 3218

<211> 181

<212> PRT

<213> Homo sapiens

<400> 3218

Gly	Val	Lys	Ala	Arg	Gln	Tyr	Pro	Trp	Gly	Val	Val	Gln	Val	Glu	Asn
1				5					10					15	
Glu	Asn	His	Cys	Asp	Phe	Val	Lys	Leu	Arg	Glu	Met	Leu	Ile	Cys	Thr
			20					25					30		
Asn	Met	Glu	Asp	Leu	Arg	Glu	Gln	Thr	His	Thr	Arg	His	Tyr	Glu	Leu
			35				40					45			
Tyr	Arg	Arg	Cys	Lys	Leu	Glu	Glu	Met	Gly	Phe	Thr	Asp	Val	Gly	Pro
			50			55					60				
Glu	Asn	Lys	Pro	Val	Ser	Val	Gln	Glu	Thr	Tyr	Glu	Ala	Lys	Arg	His
					70					75				80	
Glu	Phe	His	Gly	Glu	Arg	Gln	Arg	Lys	Glu	Glu	Glu	Met	Lys	Gln	Met
				85					90					95	
Phe	Val	Gln	Arg	Val	Lys	Glu	Lys	Glu	Ala	Ile	Leu	Lys	Glu	Ala	Glu
				100				105					110		
Arg	Glu	Leu	Gln	Ala	Lys	Phe	Glu	His	Leu	Lys	Arg	Leu	His	Gln	Glu

```
<210> 3219
<211> 1241
<212> DNA
<213> Homo sapiens
```

2426

ccccagcct ctctccctgg cctcactgct cagcctctgc tctcaccaaa ggaagcgact
 1200
 tcagaccctt cccggactcc agaggaggag ccattgaatt c
 1241

<210> 3220
 <211> 413
 <212> PRT
 <213> Homo sapiens

<400> 3220
 Ala Arg His Val Pro His Pro Ala Pro Gln Val Pro Pro Ser Arg Gly
 1 5 10 15
 Leu Gly Cys Ala Ser Ser Gly Arg His Val Val Pro Ala Gln Val His
 20 25 30
 Val Asn Gly Gly Xaa Val Thr Ser Glu Arg Glu Thr Asp Ile Leu Asp
 35 40 45
 Asp Glu Leu Pro Asn Gln Asp Gly His Ser Ala Gly Ser Met Gly Thr
 50 55 60
 Leu Ser Ser Leu Asp Gly Val Thr Asn Ile Ser Glu Gly Gly Tyr Pro
 65 70 75 80
 Glu Ala Leu Ser Pro Leu Thr Asn Gly Leu Asp Lys Ser Tyr Pro Met
 85 90 95
 Glu Pro Met Val Asn Gly Gly Gly Tyr Pro Tyr Glu Ser Ala Ser Arg
 100 105 110
 Ala Gly Pro Ala His Ala Gly His Thr Ala Pro Met Arg Pro Ser Tyr
 115 120 125
 Ser Ala Gln Glu Gly Leu Ala Gly Tyr Gln Arg Glu Gly Pro His Pro
 130 135 140
 Ala Trp Pro Gln Pro Val Thr Thr Ser His Tyr Ala His Asp Pro Ser
 145 150 155 160
 Gly Met Phe Arg Ser Gln Ser Phe Ser Glu Ala Glu Pro Gln Leu Pro
 165 170 175
 Pro Ala Pro Val Arg Gly Gly Ser Ser Arg Glu Ala Val Gln Arg Gly
 180 185 190
 Leu Asn Ser Trp Gln Gln Gln Gln Gln Gln Gln Gln Pro Arg Pro
 195 200 205
 Pro Pro Arg Gln Gln Glu Arg Ala His Leu Glu Ser Leu Val Ala Ser
 210 215 220
 Arg Pro Ser Pro Gln Pro Leu Ala Glu Thr Pro Ile Pro Ser Leu Pro
 225 230 235 240
 Glu Phe Pro Arg Ala Ala Ser Gln Gln Glu Ile Glu Gln Ser Ile Glu
 245 250 255
 Thr Leu Asn Met Leu Met Leu Asp Leu Glu Pro Ala Ser Ala Ala Ala
 260 265 270
 Pro Leu His Lys Ser Gln Ser Val Pro Gly Ala Trp Pro Gly Ala Ser
 275 280 285
 Pro Leu Ser Ser Gln Pro Leu Ser Gly Ser Ser Arg Gln Ser His Pro
 290 295 300
 Leu Thr Gln Ser Arg Ser Gly Tyr Ile Pro Ser Gly His Ser Leu Gly
 305 310 315 320
 Thr Pro Glu Pro Ala Pro Arg Ala Ser Leu Glu Ser Val Pro Pro Gly
 325 330 335
 Arg Ser Tyr Ser Pro Tyr Asp Tyr Gln Pro Cys Leu Ala Gly Pro Asn

	340		345		350										
Gln	Asp	Phe	His	Ser	Lys	Ser	Pro	Ala	Ser	Ser	Ser	Leu	Pro	Ala	Phe
	355						360					365			
Leu	Pro	Thr	Thr	His	Ser	Pro	Pro	Gly	Pro	Gln	Gln	Pro	Pro	Ala	Ser
	370					375					380				
Leu	Pro	Gly	Leu	Thr	Ala	Gln	Pro	Leu	Leu	Ser	Pro	Lys	Glu	Ala	Thr
385					390					395				400	
Ser	Asp	Pro	Ser	Arg	Thr	Pro	Glu	Glu	Glu	Pro	Leu	Asn			
			405						410						

<210> 3221

<211> 1585

<212> DNA

<213> Homo sapiens

<400> 3221

```

ctcctggctg tctctcgacc ccggcgggtct cgaaagcgac acgtgcagtg ggtggaggag
60
ccccaacgct cctgcaccgc gcggagatgg cacatccagg ccaccggtgg ggtcgagccc
120
gcaggctgga aggagatgcg atgccacctg cgcgccaacg gctacctgtg caagtaccag
180
tttgaggtct tgtgtcctgc gccgcgcccc ggggccgcct ctaacttgag ctatcgcgcg
240
cccttcagc tgcacagcgc cgctctggac ttcagtccac ctgggaccga ggtgagtgcg
300
ctctgccggg gacagctccc gatctcagtt acttgcatcg cggacgaaat cggcgctcgc
360
tgggacaaac tctcgggcca tgtgttgtgt ccctgccccg ggaggtacct ccgtgctggc
420
aaatgcgcag agctccctaa ctgcctagac gacttgggag gctttgcctg cgaatgtgct
480
acgggcttcg agctggggaa ggacggccgc tcttgtgtga ccagtgggga aggacagccg
540
acccttgggg ggaccggggg gccaccagg cgcccgccgg ccactgcaac cagccccgtg
600
ccgcagagaa catggccaat cagggtcgac gagaagctgg gagagacacc acttgtccct
660
gaacaagaca attcagtaac atctattcct gagattcctc gatggggatc acagagcacg
720
atgtctaccc ttcaaatgtc ccttcaagcc gagtcaaagg ccactatcac cccatcaggg
780
agcgtgattt ccaagtttaa ttctacgact tcctctgcca ctctcagge tttcgactcc
840
tcctctgccg tggctctcat atttgtgagc acagcagtag tagtggtggg gatcttgacc
900
atgacagtac ttgggcttgt caagctctgc tttcacgaaa gcccctcttc ccagccaagg
960
aaggagtcta tgggcccgcg gggctgtgat gagtgatcct gagcccgctg ctttgggctc
1020
cagtttgcac attgcacaaa caatgggggtg aaagtcgggg actgtgatct gcgggacaga
1080
gcagaggggtg ccttgcctgc gagtccccgt ctttgggctc tagtgatgca tagggaaaca
1140

```

ggggacatgg gcactcctgt gaacagtttt tcacttttga tgaaacgggg aaccaagagg
 1200
 aacttacttg tgtaactgac aattttctgca gaaatcccc ttcctctaaa ttccctttac
 1260
 tccactgagg agctaaatca gaactgcaca ctccctccct gatgatagag gaagtgggaag
 1320
 tgccttttagg atggtgatac tgggggaccg ggtagtgctg gggagagata ttttcttatg
 1380
 tttattcgga gaatttggag aagtgattga acttttcaag acattggaaa caaatagaac
 1440
 acaatataat ttacattaaa aaataatttc taccaaaatg gaaaggaaat gttctatgtt
 1500
 gttcaggcta ggagtatatatt ggttcgaaat cccagggaaa aaaaataaaaa ataaaaaatt
 1560
 aaaggattgt tgataaaaaa aaaaa
 1585

<210> 3222

<211> 331

<212> PRT

<213> Homo sapiens

<400> 3222

Leu	Leu	Ala	Val	Leu	Arg	Pro	Arg	Arg	Ser	Arg	Lys	Arg	His	Val	Gln
1				5					10					15	
Trp	Val	Glu	Glu	Pro	Gln	Arg	Ser	Cys	Thr	Ala	Arg	Arg	Trp	His	Ile
			20					25					30		
Gln	Ala	Thr	Gly	Gly	Val	Glu	Pro	Ala	Gly	Trp	Lys	Glu	Met	Arg	Cys
		35					40				45				
His	Leu	Arg	Ala	Asn	Gly	Tyr	Leu	Cys	Lys	Tyr	Gln	Phe	Glu	Val	Leu
	50					55				60					
Cys	Pro	Ala	Pro	Arg	Pro	Gly	Ala	Ala	Ser	Asn	Leu	Ser	Tyr	Arg	Ala
65					70					75				80	
Pro	Phe	Gln	Leu	His	Ser	Ala	Ala	Leu	Asp	Phe	Ser	Pro	Pro	Gly	Thr
				85					90					95	
Glu	Val	Ser	Ala	Leu	Cys	Arg	Gly	Gln	Leu	Pro	Ile	Ser	Val	Thr	Cys
		100					105						110		
Ile	Ala	Asp	Glu	Ile	Gly	Ala	Arg	Trp	Asp	Lys	Leu	Ser	Gly	Asp	Val
	115						120						125		
Leu	Cys	Pro	Cys	Pro	Gly	Arg	Tyr	Leu	Arg	Ala	Gly	Lys	Cys	Ala	Glu
	130					135					140				
Leu	Pro	Asn	Cys	Leu	Asp	Asp	Leu	Gly	Gly	Phe	Ala	Cys	Glu	Cys	Ala
145				150						155					160
Thr	Gly	Phe	Glu	Leu	Gly	Lys	Asp	Gly	Arg	Ser	Cys	Val	Thr	Ser	Gly
				165					170					175	
Glu	Gly	Gln	Pro	Thr	Leu	Gly	Gly	Thr	Gly	Val	Pro	Thr	Arg	Arg	Pro
			180					185					190		
Pro	Ala	Thr	Ala	Thr	Ser	Pro	Val	Pro	Gln	Arg	Thr	Trp	Pro	Ile	Arg
	195						200						205		
Val	Asp	Glu	Lys	Leu	Gly	Glu	Thr	Pro	Leu	Val	Pro	Glu	Gln	Asp	Asn
	210					215					220				
Ser	Val	Thr	Ser	Ile	Pro	Glu	Ile	Pro	Arg	Trp	Gly	Ser	Gln	Ser	Thr
225					230					235				240	
Met	Ser	Thr	Leu	Gln	Met	Ser	Leu	Gln	Ala	Glu	Ser	Lys	Ala	Thr	Ile

<210> 3224

<211> 224
 <212> PRT
 <213> Homo sapiens

<400> 3224

Xaa	Arg	Val	Val	His	Gly	Leu	Gln	Pro	Pro	Cys	Phe	Gln	Glu	Pro	Cys
1				5					10					15	
Ser	Asn	Pro	Asp	Ser	Leu	Ile	Phe	Gly	Ala	Leu	Thr	Ile	Met	Thr	Gly
		20						25					30		
Val	Ile	Gly	Val	Ile	Leu	Gly	Ala	Glu	Ala	Ser	Arg	Arg	Tyr	Lys	Lys
		35					40					45			
Val	Ile	Pro	Gly	Ala	Glu	Pro	Leu	Ile	Cys	Ala	Ser	Ser	Leu	Leu	Ala
	50					55				60					
Thr	Ala	Pro	Cys	Leu	Tyr	Leu	Ala	Leu	Val	Leu	Ala	Pro	Thr	Thr	Leu
65					70					75					80
Leu	Ala	Ser	Tyr	Val	Phe	Leu	Gly	Leu	Gly	Glu	Leu	Leu	Leu	Ser	Cys
				85					90					95	
Asn	Trp	Ala	Val	Val	Ala	Asp	Ile	Leu	Leu	Ser	Val	Val	Val	Pro	Arg
			100					105					110		
Cys	Arg	Gly	Thr	Ala	Glu	Ala	Leu	Gln	Ile	Thr	Val	Gly	His	Ile	Leu
		115					120					125			
Gly	Asp	Ala	Gly	Ser	Pro	Tyr	Leu	Thr	Gly	Leu	Ile	Ser	Ser	Val	Leu
	130					135					140				
Arg	Pro	Gly	Ala	Leu	Thr	Pro	Leu	Gln	Arg	Phe	Arg	Ser	Leu	Gln	Gln
145					150					155					160
Ser	Phe	Leu	Cys	Cys	Ala	Phe	Val	Ile	Ala	Leu	Gly	Gly	Gly	Cys	Phe
			165						170					175	
Leu	Leu	Thr	Ala	Leu	Tyr	Leu	Glu	Arg	Asp	Glu	Thr	Arg	Ala	Trp	Gln
			180					185					190		
Pro	Val	Thr	Gly	Thr	Pro	Asp	Ser	Asn	Asp	Val	Asp	Ser	Asn	Asp	Leu
		195					200					205			
Glu	Arg	Gln	Gly	Leu	Leu	Ser	Gly	Ala	Gly	Ala	Ser	Thr	Glu	Glu	Pro
	210					215					220				

<210> 3225
 <211> 506
 <212> DNA
 <213> Homo sapiens

<400> 3225

```

cgctgcccc agtccatctg tgacaggcgg gcgtgagtgt agaggaatag ctaggctgta
60
gcagtcgaaa ttctttctga accccatata ggatgaaggt tatatttcca aaattaaac
120
agaggaacat tttaaattggc ctacgtccat gcaccttctt tattcaagaa gctaccaaga
180
attctgcttg tttcccagtc cctaaaatgc ctgtgccatg tgccctgggt gaagaactag
240
tcccatgcc aaggggtaca ggccccgctg tagtttggcc agcccaaccg cagcaagggg
300
aagtggaaac acagcctcaa cccacacaga ggatggaacc accttctgca gctaaaaata
360
accacaccgc ctttgagggt agccacccaa gatgcagggt gggctgtatg aaactccacg
420

```

aacatgggat gagtttcatt ttcagggttc cgaggggcca tgagtgggtac caagatccct
 480
 ggaggtgccc ttggtttccc atgtag
 506

<210> 3226

<211> 137

<212> PRT

<213> Homo sapiens

<400> 3226

Met	Lys	Val	Ile	Phe	Pro	Lys	Leu	Lys	Gln	Arg	Asn	Ile	Leu	Asn	Gly
1				5					10					15	
Leu	Arg	Pro	Cys	Thr	Phe	Phe	Ile	Gln	Glu	Ala	Thr	Lys	Asn	Ser	Ala
			20					25					30		
Cys	Phe	Pro	Val	Pro	Lys	Met	Pro	Val	Pro	Cys	Ala	Leu	Gly	Glu	Glu
			35				40					45			
Leu	Val	Pro	Cys	His	Arg	Gly	Thr	Gly	Pro	Ala	Val	Val	Trp	Pro	Ala
	50					55					60				
Gln	Pro	Gln	Gln	Gly	Glu	Val	Glu	Pro	Gln	Pro	Gln	Pro	Thr	Gln	Arg
65					70				75					80	
Met	Glu	Pro	Pro	Ser	Ala	Ala	Lys	Asn	Asn	His	Thr	Ala	Phe	Glu	Val
				85				90						95	
Ser	His	Pro	Arg	Cys	Arg	Trp	Gly	Cys	Met	Lys	Leu	His	Glu	His	Gly
			100				105					110			
Met	Ser	Phe	Ile	Phe	Arg	Val	Pro	Arg	Gly	His	Glu	Trp	Tyr	Gln	Asp
		115				120						125			
Pro	Trp	Arg	Cys	Pro	Trp	Phe	Pro	Met							
	130					135									

<210> 3227

<211> 1623

<212> DNA

<213> Homo sapiens

<400> 3227

nngtgtaggg gtagattttc gctgcagtgt tccccgagcc tgtagacgc agcggccggg
 60
 agactgagag aggaaaggat agaggaagtg ctgccctagg ctgcatgagt cgaagcaagc
 120
 gtgtttcctt cccgccaggc aagtgcctt agaaaccggg ccccgcccc ttcttgccct
 180
 gcattcccat cccctctccc ggggaggagg tgaggacctc cttggttctt ttggttctgt
 240
 cagtgagccc cttccttggc catgaagctc gtgaggaaga acatcgagaa ggacaatgcg
 300
 ggccaggtga ccctggtecc cgaggagcct gaggacatgt ggcacactta caacctcggtg
 360
 cagtggggag acagcctgag cgctccacc atccgcaagg tacagacaga gtcctccacg
 420
 ggcagcgtgg gcagcaaccg ggtccgcact accctcactc tctgcgtgga ggccatcgac
 480
 ttcgactctc aagcctgcca gctgcgggtt aaggggacca acatccaaga gaatgagtat
 540

gtcaagatgg gggcttacca caccatcgag ctggagccca accgccagtt caccctggcc
 600
 aagaagcagt gggatagtgt ggtactggag cgcacgcagc aggcctgtga cccagcctgg
 660
 agcgctgatg tggcggtgtg ggtcatgcag gaaggcctcg cccatatctg cttagtcaact
 720
 cccagcatga ccttcactcg ggccaagggtg gaggtgaaca tccctaggaa aaggaaaggc
 780
 aattgctctc agcatgaccg ggccttggag cggttctatg aacagggtggc ccaggctatc
 840
 cagcgccaca tacactttga tgttgtaaag tgcacacctg tggccagccc aggatttgtg
 900
 agggagcagt tctgcgacta catgtttcaa caagcagtga agaccgacaa caaactgctc
 960
 ctggaaaacc ggtccaaatt tcttcaggta catgcctcct ccggacacaa gtactcctcg
 1020
 aaagaggccc tttgtgacct tactgtggct agccgccttt cagacactaa agctgctggg
 1080
 gaagtcaaag ccttggatga cttctataaa atgttacagc atgaaccgga tcgagctttc
 1140
 tatggactca agcagggtga gaaggccaat gaagccatgg caattgacac attgtcatc
 1200
 agcgatgagc tcttcaggca tcaggatgta gccacacgga gccggtatgt gaggctgggtg
 1260
 gacagtgtga aagagaatgc aggcaccgtt aggatattct ctagtcttca cgtttctggg
 1320
 gaacagctca gccagttgac tggggtagct gccattctcc gcttcctgt tcccgaactt
 1380
 tctgaccaag aggggtgattc cagttctgaa gaggattaat gattgaaact taaaattgag
 1440
 acaatcttgt gtttcctaaa ctgttacagt acatttctca gcacacctgt gacagaaagc
 1500
 tgcaagaatg gcactttttg attcatacag ggatttctta tgtctttggc tacactagat
 1560
 attttgtgat tggcaagaca tgtattttaa caataaacta aaaggaaata aaaaaaaaaa
 1620
 aaa
 1623

<210> 3228

<211> 385

<212> PRT

<213> Homo sapiens

<400> 3228

Met	Lys	Leu	Val	Arg	Lys	Asn	Ile	Glu	Lys	Asp	Asn	Ala	Gly	Gln	Val
1				5				10					15		
Thr	Leu	Val	Pro	Glu	Glu	Pro	Glu	Asp	Met	Trp	His	Thr	Tyr	Asn	Leu
			20					25					30		
Val	Gln	Val	Gly	Asp	Ser	Leu	Arg	Ala	Ser	Thr	Ile	Arg	Lys	Val	Gln
		35					40					45			
Thr	Glu	Ser	Ser	Thr	Gly	Ser	Val	Gly	Ser	Asn	Arg	Val	Arg	Thr	Thr
	50					55				60					
Leu	Thr	Leu	Cys	Val	Glu	Ala	Ile	Asp	Phe	Asp	Ser	Gln	Ala	Cys	Gln

65 70 75 80
 Leu Arg Val Lys Gly Thr Asn Ile Gln Glu Asn Glu Tyr Val Lys Met
 85 90 95
 Gly Ala Tyr His Thr Ile Glu Leu Glu Pro Asn Arg Gln Phe Thr Leu
 100 105 110
 Ala Lys Lys Gln Trp Asp Ser Val Val Leu Glu Arg Ile Glu Gln Ala
 115 120 125
 Cys Asp Pro Ala Trp Ser Ala Asp Val Ala Ala Val Val Met Gln Glu
 130 135 140
 Gly Leu Ala His Ile Cys Leu Val Thr Pro Ser Met Thr Leu Thr Arg
 145 150 155 160
 Ala Lys Val Glu Val Asn Ile Pro Arg Lys Arg Lys Gly Asn Cys Ser
 165 170 175
 Gln His Asp Arg Ala Leu Glu Arg Phe Tyr Glu Gln Val Val Gln Ala
 180 185 190
 Ile Gln Arg His Ile His Phe Asp Val Val Lys Cys Ile Leu Val Ala
 195 200 205
 Ser Pro Gly Phe Val Arg Glu Gln Phe Cys Asp Tyr Met Phe Gln Gln
 210 215 220
 Ala Val Lys Thr Asp Asn Lys Leu Leu Leu Glu Asn Arg Ser Lys Phe
 225 230 235 240
 Leu Gln Val His Ala Ser Ser Gly His Lys Tyr Ser Leu Lys Glu Ala
 245 250 255
 Leu Cys Asp Pro Thr Val Ala Ser Arg Leu Ser Asp Thr Lys Ala Ala
 260 265 270
 Gly Glu Val Lys Ala Leu Asp Asp Phe Tyr Lys Met Leu Gln His Glu
 275 280 285
 Pro Asp Arg Ala Phe Tyr Gly Leu Lys Gln Val Glu Lys Ala Asn Glu
 290 295 300
 Ala Met Ala Ile Asp Thr Leu Leu Ile Ser Asp Glu Leu Phe Arg His
 305 310 315 320
 Gln Asp Val Ala Thr Arg Ser Arg Tyr Val Arg Leu Val Asp Ser Val
 325 330 335
 Lys Glu Asn Ala Gly Thr Val Arg Ile Phe Ser Ser Leu His Val Ser
 340 345 350
 Gly Glu Gln Leu Ser Gln Leu Thr Gly Val Ala Ala Ile Leu Arg Phe
 355 360 365
 Pro Val Pro Glu Leu Ser Asp Gln Glu Gly Asp Ser Ser Ser Glu Glu
 370 375 380
 Asp
 385

<210> 3229

<211> 1008

<212> DNA

<213> Homo sapiens

<400> 3229

nngcgcgcct cgcgctccag ggagccccgc cctcccgcgg cacctccgca gcaaccgcgc
 60
 cctgcactgg gcgcgcgaga gctgctaggg cggtttctct gcctcgggcc tgttgggcag
 120
 ggccgggctaa ggtgcgcgtg ctcgctggtt ctaacccttc tgttgggcgt ttctgctgag
 180

aggcgggagg cgctgagagt ctgtgcggag gtccgtggac agactgcttt gctcgttggt
 240
 gctcttcgga ggcggcgatc cccgaaggcg agctgaaata cggctgcagg ctacaatttg
 300
 cagccgacca ttatggaaga cggcaagcgg gagagggtggc ccaccctcat ggagcgcttg
 360
 tgctcggatg gcttcgcatt tccccaatat cccattaaac cgtatcatct gaagaggatc
 420
 cacagagctg tcttacgtgg taatctggag gaactgaagt accttctgct cacgtattat
 480
 gacatcaata agagagacag gaaggaaagg accgccctac atttggcctg tgccactggc
 540
 caaccggaaa tggtagatct cctgggtgtcc agaagatgtg agcttaacct ctgcgaccgt
 600
 gaagacagga cacctctgat caaggctgta caactgaggc aggaggcttg tgcaactctt
 660
 ctgctgcaaa atggcgccga tccaaatatt acggatgtct ttggaaggac tgctctgcac
 720
 tacgctgtgt ataatagaaga tacatccatg atagaaaaac ttctttcaca tggtagaaaat
 780
 attgaagaat gcagcaagaa tgaatatcag ccactgttac ttgctgtgag tcgaagaaaa
 840
 gtgaaaatgg tggaattttt attaaagaaa aaagcaaatg taaatgccat tgattatctt
 900
 ggcagatcag cctcactact tgctgttact cttggagaaa aagatatagt cattcttctt
 960
 ctgcagcaca atattgatgt gttttctcga gatgtgtatg gaaagctt
 1008

<210> 3230

<211> 232

<212> PRT

<213> Homo sapiens

<400> 3230

Met	Glu	Asp	Gly	Lys	Arg	Glu	Arg	Trp	Pro	Thr	Leu	Met	Glu	Arg	Leu
1				5					10					15	
Cys	Ser	Asp	Gly	Phe	Ala	Phe	Pro	Gln	Tyr	Pro	Ile	Lys	Pro	Tyr	His
			20					25					30		
Leu	Lys	Arg	Ile	His	Arg	Ala	Val	Leu	Arg	Gly	Asn	Leu	Glu	Glu	Leu
			35				40					45			
Lys	Tyr	Leu	Leu	Leu	Thr	Tyr	Tyr	Asp	Ile	Asn	Lys	Arg	Asp	Arg	Lys
			50			55					60				
Glu	Arg	Thr	Ala	Leu	His	Leu	Ala	Cys	Ala	Thr	Gly	Gln	Pro	Glu	Met
65					70					75				80	
Val	His	Leu	Leu	Val	Ser	Arg	Arg	Cys	Glu	Leu	Asn	Leu	Cys	Asp	Arg
				85				90					95		
Glu	Asp	Arg	Thr	Pro	Leu	Ile	Lys	Ala	Val	Gln	Leu	Arg	Gln	Glu	Ala
			100				105					110			
Cys	Ala	Thr	Leu	Leu	Leu	Gln	Asn	Gly	Ala	Asp	Pro	Asn	Ile	Thr	Asp
			115			120					125				
Val	Phe	Gly	Arg	Thr	Ala	Leu	His	Tyr	Ala	Val	Tyr	Asn	Glu	Asp	Thr
			130			135					140				
Ser	Met	Ile	Glu	Lys	Leu	Leu	Ser	His	Gly	Thr	Asn	Ile	Glu	Glu	Cys

145		150		155		160									
Ser	Lys	Asn	Glu	Tyr	Gln	Pro	Leu	Leu	Leu	Ala	Val	Ser	Arg	Arg	Lys
				165					170					175	
Val	Lys	Met	Val	Glu	Phe	Leu	Leu	Lys	Lys	Lys	Ala	Asn	Val	Asn	Ala
			180					185					190		
Ile	Asp	Tyr	Leu	Gly	Arg	Ser	Ala	Leu	Ile	Leu	Ala	Val	Thr	Leu	Gly
		195					200					205			
Glu	Lys	Asp	Ile	Val	Ile	Leu	Leu	Gln	His	Asn	Ile	Asp	Val	Phe	
	210					215				220					
Ser	Arg	Asp	Val	Tyr	Gly	Lys	Leu								
225					230										

<210> 3231

<211> 1367

<212> DNA

<213> Homo sapiens

<400> 3231

```

nnacgcgtga aggggaagtt tcgcctcaga aggctgcctc gctggtccga attcgggtggc
60
gccacgtccg cccgtctccg ccttctgcat cgcggtctcg gcggtctcca cctagacacc
120
taacagtcgc ggagccggcc gcgtcgtgag ggggtcggca cggggagtcg ggcggtcttg
180
tgcattcttg ctacctgttg gtcgaagatg tcggacatcg gagactggtt caggagcatc
240
ccggcgatca cgcgctattg gttcgccgcc accgtcgccg tgcccttggt cggcaaactc
300
ggcctcatca gcccggccta cctcttcctc tggcccgaag ccttccttta tcgctttcag
360
atctggaggc caatcactgc caccttttat ttccctgttg gtccaggaac tggatttctt
420
tatttggtca atttatattt cttatatcag tattctacgc gacttgaaac aggagctttt
480
gatgggaggc cagcagacta tttattcatg ctctcttta actggatttg catcgtgatt
540
actggcttag caatggatat gcagttgctg atgattcctc tgatcatgtc agtactttat
600
gtctgggccc agctgaacag agacatgatt gtatcatttt ggtttggaac acgatttaag
660
gcctgctatt taccctgggt tatccttgga ttcaactata tcatcgaggg ctcggtaatc
720
aatgagctta ttggaaatct ggttgacat ctttattttt tctaattgtt cagataccca
780
atggacttgg gaggaagaaa tttctatcc acacctcagt tttgtaccg ctggctgccc
840
agtaggagag gaggagtatc aggatttggg gtgccccctg ctagcatgag gcgagctgct
900
gatcagaatg gcggaggcgg gagacacaac tggggccagg gctttcgact tggagaccag
960
tgaaggggcg gcctcgggca gccgctcctc tcaagccaca tttctccca gtgctgggtg
1020
cacttaacaa ctgcgttctg gctaacactg ttggacctga cccacactga atgtagtctt
1080

```

tcagtacgag acaaagtttc ttaaattcccg aagaaaaata taagtgttcc acaagtttca
 1140
 cgattctcat tcaagtcctt actgctgtga agaacaaata ccaactgtgc aaattgcaaa
 1200
 actgactaca ttttttggtg tttttttttt tccccctttcc gttctgaata atggggttta
 1260
 gcgggtccta gtctgctggc attgagctgg ggctgggtca ccaaaccctt cccaaaagga
 1320
 cccttatctc tttcttgac acatgcctct ctccccctt cacgcgt
 1367

<210> 3232

<211> 251

<212> PRT

<213> Homo sapiens

<400> 3232

Met	Ser	Asp	Ile	Gly	Asp	Trp	Phe	Arg	Ser	Ile	Pro	Ala	Ile	Thr	Arg
1				5					10					15	
Tyr	Trp	Phe	Ala	Ala	Thr	Val	Ala	Val	Pro	Leu	Val	Gly	Lys	Leu	Gly
			20					25					30		
Leu	Ile	Ser	Pro	Ala	Tyr	Leu	Phe	Leu	Trp	Pro	Glu	Ala	Phe	Leu	Tyr
		35					40					45			
Arg	Phe	Gln	Ile	Trp	Arg	Pro	Ile	Thr	Ala	Thr	Phe	Tyr	Phe	Pro	Val
	50					55					60				
Gly	Pro	Gly	Thr	Gly	Phe	Leu	Tyr	Leu	Val	Asn	Leu	Tyr	Phe	Leu	Tyr
65					70					75					80
Gln	Tyr	Ser	Thr	Arg	Leu	Glu	Thr	Gly	Ala	Phe	Asp	Gly	Arg	Pro	Ala
				85					90					95	
Asp	Tyr	Leu	Phe	Met	Leu	Leu	Phe	Asn	Trp	Ile	Cys	Ile	Val	Ile	Thr
			100					105					110		
Gly	Leu	Ala	Met	Asp	Met	Gln	Leu	Leu	Met	Ile	Pro	Leu	Ile	Met	Ser
		115					120					125			
Val	Leu	Tyr	Val	Trp	Ala	Gln	Leu	Asn	Arg	Asp	Met	Ile	Val	Ser	Phe
	130					135					140				
Trp	Phe	Gly	Thr	Arg	Phe	Lys	Ala	Cys	Tyr	Leu	Pro	Trp	Val	Ile	Leu
145					150					155					160
Gly	Phe	Asn	Tyr	Ile	Ile	Gly	Gly	Ser	Val	Ile	Asn	Glu	Leu	Ile	Gly
				165					170					175	
Asn	Leu	Val	Gly	His	Leu	Tyr	Phe	Phe	Leu	Met	Phe	Arg	Tyr	Pro	Met
			180					185					190		
Asp	Leu	Gly	Gly	Arg	Asn	Phe	Leu	Ser	Thr	Pro	Gln	Phe	Leu	Tyr	Arg
	195						200					205			
Trp	Leu	Pro	Ser	Arg	Arg	Gly	Gly	Val	Ser	Gly	Phe	Gly	Val	Pro	Pro
	210					215					220				
Ala	Ser	Met	Arg	Arg	Ala	Ala	Asp	Gln	Asn	Gly	Gly	Gly	Gly	Arg	His
225					230					235					240
Asn	Trp	Gly	Gln	Gly	Phe	Arg	Leu	Gly	Asp	Gln					
				245						250					

<210> 3233

<211> 975

<212> DNA

<213> Homo sapiens

<400> 3233
 nacgcgtacg tgggtggagct ctgcggtgttt actatTTTTg gaaatgaaga aaatggaaag
 60
 accgttgttt accttgtggc ttccatctg ttctttgtta tgtttgtatg gtcctattgg
 120
 atgacaatTT tcatctctcc cgcttcccc tccaaagagt tctacttgTc caattctgaa
 180
 aaggaacgTt atgaaaaaga attcagccaa gaaagacaac aagaaatTTt gagaagagca
 240
 gcaagagctt tacctatcta taccacatca gcttcaaaaa ctatcagata ttgtgaaaaa
 300
 tgtcagctga ttaaacctga tcggggcgcat cactgctcag cctgtgactc atgtattctt
 360
 aagatggatc atccctgtcc ttgggtgaat aactgtgtgg gattttctaa ttacaaattc
 420
 ttcttctgtt ttttattgta ttccctatta tattgccttt tcgtggccgc acagttttag
 480
 agtacttaaa aaatTTtTga cgaaagaacc gacaaaaacc cgggccaana ttccacgtac
 540
 ttttttcttt tctttgtgtc tgcaatgttc ttcacagcg tctcttact tttcagctac
 600
 cactgctggc tttaaacagc attgtccaca gctccgtctg cagggtcagg gcatggcctc
 660
 tctccgtgtt cctgtgaaga gccttcattg gaatcatccc gggacataca gcttgaatgt
 720
 gctgtctggc tagccctctc acaagtcggt cactctgcac aaggaatccg agagctcatc
 780
 aaggatcagc acggtctggg gccaggtgg ggtggaacac gcacgggtcca caagcaattc
 840
 tgtctttctc aaggcttttt cttgtgcagt atgaaatcct tcatatttca tatgaagtat
 900
 gtgccttctg gggcactgag ctcaggaact ccaaaaagac cccttcgggc cggatcccgg
 960
 cttcaaggct gcccc
 975

<210> 3234

<211> 159

<212> PRT

<213> Homo sapiens

<400> 3234
 Xaa Ala Tyr Val Val Glu Leu Cys Val Phe Thr Ile Phe Gly Asn Glu
 1 5 10 15
 Glu Asn Gly Lys Thr Val Val Tyr Leu Val Ala Phe His Leu Phe Phe
 20 25 30
 Val Met Phe Val Trp Ser Tyr Trp Met Thr Ile Phe Thr Ser Pro Ala
 35 40 45
 Ser Pro Ser Lys Glu Phe Tyr Leu Ser Asn Ser Glu Lys Glu Arg Tyr
 50 55 60
 Glu Lys Glu Phe Ser Gln Glu Arg Gln Gln Glu Ile Leu Arg Arg Ala
 65 70 75 80
 Ala Arg Ala Leu Pro Ile Tyr Thr Thr Ser Ala Ser Lys Thr Ile Arg

Xaa																
1	Glu	Thr	Glu	Leu	Gln	Thr	Tyr	Lys	His	Ser	Arg	Gln	Gly	Leu	Asp	
				5					10					15		
	Glu	Met	Tyr	Asn	Glu	Ala	Arg	Arg	Gln	Leu	Arg	Asp	Glu	Ser	Gln	Leu
				20					25					30		
	Arg	Gln	Asp	Val	Glu	Asn	Glu	Leu	Ala	Val	Gln	Val	Ser	Met	Lys	His
				35				40					45			
	Glu	Ile	Glu	Leu	Ala	Met	Lys	Leu	Leu	Glu	Lys	Asp	Ile	His	Glu	Lys
		50					55					60				
	Gln	Asp	Thr	Leu	Ile	Gly	Leu	Arg	Gln	Gln	Leu	Glu	Glu	Val	Lys	Ala
						70					75				80	
	Ile	Asn	Ile	Glu	Met	Tyr	Gln	Lys	Leu	Gln	Gly	Ser	Glu	Asp	Gly	Leu

```

<400> 3237
nctctgggct gcgacctacc tcgcagaggg gtttgacta aggcgctggg cgccgggctc
60
cgggcgctgt ggaccatggc tccgcccgcg gcgcctggcc gggaccgtgt gggccgtgag
120
gatgaggacc gttgggaagt acggggggac cgcaaggccc ggaagcccct ggtggagaag
180
aagcgacgcg cgcggatcaa cgagagtctt caggagtgc ggctgctgct ggcgggcgcg
240
gaggtgcagg ccaagctgga gaacgccgaa gtgctggagc tgacggtgcg gcgggtccag
300
ggtgtgctgc ggggccgggc gcgcgagcgc gagcagctgc aggcggaagc gagcgagcgc
360
ttcgctgccg gctacatcca gtgcatgcac gaggtgcaca cgttcgtgtc cacgtgccag
420
gccatcgacg ctaccgtcgc tgccgagctc ctgaaccatc tgctcgagtc catgccgctg
480
cgtgagggca gcagcttcca ggatctgctg ggggacgccc tggcgggggc acctagagcc
540
cctggacgga gtggctggcc tgcggggggc gctccgggat cccaataacc cagccccccg
600
ggtcctgggg acgacctgtg ctccgacctg gaggaggccc ctgaggctga actgagtcag
660
gtcctgctg agggggccga cttggtgccc gcagccctgg gcagcctgac cacagcccaa
720
attgcccgga gtgtctggag gccttggtga ccaatgccag ccagagtcct gcgggggtgg
780
gcccggccct ccctggatct cctccctcct ccagggggtt cagatgtggg ggggtagggc
840
cctggaagtc tcccaggctc tccctccctc ctctgatgga tggcttgagc ggcagcccct
900
gtaaccagc ccagtcaggc ccagccccg tttcttaaga aacttttagg gaccctgcag
960
ctctggagtg ggtggaggga gggagctacg ggcaggagga agaattttgt agagctgcc
1020

```

gcgctctccc aggttcaccc acccaggctt caccagccct gtgcgggctc tgggggcaga
 1080
 ggtggcagaa atggtgctgg gcactagtgt tccaggcagc cctgggctaa acaaaagctt
 1140
 gaacttgcca cttcagcggg gagatgagag gcagggtgcac tcagctgcac tgcccagagc
 1200
 tgtgatgctc tgtacatctt gttttagtagca cacttgagtt tgtgtattcc attgacatca
 1260
 aatgtgacaa ttttactaaa taaagaattt tggagttagt tacccttgaa aaaaaagtcg
 1320
 acg
 1323

<210> 3238
 <211> 249
 <212> PRT
 <213> Homo sapiens

<400> 3238
 Xaa Leu Gly Cys Asp Leu Pro Arg Arg Gly Val Cys Thr Lys Ala Leu
 1 5 10 15
 Gly Ala Gly Leu Arg Ala Leu Trp Thr Met Ala Pro Pro Ala Ala Pro
 20 25 30
 Gly Arg Asp Arg Val Gly Arg Glu Asp Glu Asp Arg Trp Glu Val Arg
 35 40 45
 Gly Asp Arg Lys Ala Arg Lys Pro Leu Val Glu Lys Lys Arg Arg Ala
 50 55 60
 Arg Ile Asn Glu Ser Leu Gln Glu Leu Arg Leu Leu Leu Ala Gly Ala
 65 70 75 80
 Glu Val Gln Ala Lys Leu Glu Asn Ala Glu Val Leu Glu Leu Thr Val
 85 90 95
 Arg Arg Val Gln Gly Val Leu Arg Gly Arg Ala Arg Glu Arg Glu Gln
 100 105 110
 Leu Gln Ala Glu Ala Ser Glu Arg Phe Ala Ala Gly Tyr Ile Gln Cys
 115 120 125
 Met His Glu Val His Thr Phe Val Ser Thr Cys Gln Ala Ile Asp Ala
 130 135 140
 Thr Val Ala Ala Glu Leu Leu Asn His Leu Leu Glu Ser Met Pro Leu
 145 150 155 160
 Arg Glu Gly Ser Ser Phe Gln Asp Leu Leu Gly Asp Ala Leu Ala Gly
 165 170 175
 Pro Pro Arg Ala Pro Gly Arg Ser Gly Trp Pro Ala Gly Gly Ala Pro
 180 185 190
 Gly Ser Pro Ile Pro Ser Pro Pro Gly Pro Gly Asp Asp Leu Cys Ser
 195 200 205
 Asp Leu Glu Glu Ala Pro Glu Ala Glu Leu Ser Gln Ala Pro Ala Glu
 210 215 220
 Gly Pro Asp Leu Val Pro Ala Ala Leu Gly Ser Leu Thr Thr Ala Gln
 225 230 235 240
 Ile Ala Arg Ser Val Trp Arg Pro Trp
 245

<210> 3239
 <211> 432

<212> DNA

<213> Homo sapiens

<400> 3239

aaaaccaaag attctcctgg agttttctct aaactgggtg ttctcctgag gagagtgaca
60
agaaacttgg tgagaaataa gctggcagtg attacgcgtc tccttcagaa tctgatcatg
120
ggtttgttcc tccttttctt cgttctgcgg gtccgaagca atgtgctaaa gggtgctatc
180
caggaccgcg taggtctcct ttaccagttt gtgggcgcca ccccgtaac aggcattgctg
240
aacgctgtga atctgtttcc cgtgctgcga gctgtcagcg accaggagag tcaggacggc
300
ctctaccaga agtggcagat gatgctggcc tatgcaactgc acgtcctccc cttcagcgtt
360
gttgccacca tgattttcag cagtgtgtgc tactggacgc tgggcttaca tcctgaggtt
420
gcccgattgg gt
432

<210> 3240

<211> 144

<212> PRT

<213> Homo sapiens

<400> 3240

Lys	Thr	Lys	Asp	Ser	Pro	Gly	Val	Phe	Ser	Lys	Leu	Gly	Val	Leu	Leu
1				5					10					15	
Arg	Arg	Val	Thr	Arg	Asn	Leu	Val	Arg	Asn	Lys	Leu	Ala	Val	Ile	Thr
			20					25					30		
Arg	Leu	Leu	Gln	Asn	Leu	Ile	Met	Gly	Leu	Phe	Leu	Leu	Phe	Phe	Val
		35					40					45			
Leu	Arg	Val	Arg	Ser	Asn	Val	Leu	Lys	Gly	Ala	Ile	Gln	Asp	Arg	Val
	50					55					60				
Gly	Leu	Leu	Tyr	Gln	Phe	Val	Gly	Ala	Thr	Pro	Tyr	Thr	Gly	Met	Leu
65					70					75				80	
Asn	Ala	Val	Asn	Leu	Phe	Pro	Val	Leu	Arg	Ala	Val	Ser	Asp	Gln	Glu
			85						90					95	
Ser	Gln	Asp	Gly	Leu	Tyr	Gln	Lys	Trp	Gln	Met	Met	Leu	Ala	Tyr	Ala
		100						105					110		
Leu	His	Val	Leu	Pro	Phe	Ser	Val	Val	Ala	Thr	Met	Ile	Phe	Ser	Ser
		115					120					125			
Val	Cys	Tyr	Trp	Thr	Leu	Gly	Leu	His	Pro	Glu	Val	Ala	Arg	Leu	Gly
	130					135					140				

<210> 3241

<211> 492

<212> DNA

<213> Homo sapiens

<400> 3241

gtggaatttt tttagacaaa gtctcaaaaa acaacaaaac aaacaaaagg taagataaat
60

acgaaataca aaataagagg caggaagagc ccaaagcatc agaaatgtgc cagttataat
 120
 gggccaaaat cccctcttgt gtctccagaa gtatttgaaa aatacgttag gatctgcctc
 180
 acagacatgc tcccaggaca ctgcacagca aggaggtacg gcgggcccag ccagccaagg
 240
 cagaggagga catcactgcc acagcagggg gcctgactgg cagcaaaagg gacgactccg
 300
 gcgaaaagtc agcaggaaac aggacagggg ctggaccaat ggcctccctc agccccacac
 360
 cccacccagg caggagcggg gcctggcccg gggcaggcgg gtgggagagc tactgagtg
 420
 ggcagcaggg catggcccct gatgctgcag gtaccagggc tgcagctgca gaaacctcag
 480
 tgggaaccca gg
 492

<210> 3242

<211> 107

<212> PRT

<213> Homo sapiens

<400> 3242

Met	Gly	Gln	Asn	Pro	Leu	Leu	Cys	Leu	Gln	Lys	Tyr	Leu	Lys	Asn	Thr
1				5					10					15	
Leu	Gly	Ser	Ala	Ser	Gln	Thr	Cys	Ser	Gln	Asp	Thr	Arg	Gln	Gln	Gly
			20					25					30		
Gly	Thr	Ala	Gly	Pro	Ala	Ser	Gln	Gly	Arg	Gly	Gly	His	His	Cys	His
		35					40					45			
Ser	Arg	Gly	Pro	Asp	Trp	Gln	Gln	Lys	Gly	Arg	Leu	Arg	Arg	Lys	Val
	50					55					60				
Ser	Arg	Lys	Gln	Asp	Arg	Gly	Trp	Thr	Asn	Gly	Leu	Pro	Gln	Pro	His
65				70					75					80	
Thr	Pro	Pro	Arg	Gln	Glu	Arg	Cys	Leu	Ala	Arg	Gly	Arg	Arg	Val	Gly
			85					90						95	
Glu	Leu	Thr	Glu	Trp	Ala	Ala	Gly	His	Gly	Pro					
			100					105							

<210> 3243

<211> 944

<212> DNA

<213> Homo sapiens

<400> 3243

gatctgcatt ttcaagttag caaagaccgc tatggagggc agccactttt ctgagagaag
 60
 ttccccaccc tttggtctgg ggcaaggagt acttacggag tgacaaaggg aaaagtctgc
 120
 tttgaggcaa aggtaacca gaatctccca atgaaagaag gctgcacaga ggtctctctc
 180
 ctctgagttg ggtggtctgt tgatttttcc cgtccacagc ttggtgaaga tgaattctct
 240
 tacggtttcg atggacgagg actcaaggca gaaaatggac aatttgagga atttggccag
 300

acttttgggg agaatgatgt tattggctgc ttgctaatt ttgagactga agaagtagaa
 360
 ctttccttct ccaagaatgg agaagaccta ggtgtggcat tctggatcag caaggattcc
 420
 ctggcagacc gggcccttct accccatgtc ctctgcaaaa attgtgttgt agaattaaac
 480
 ttcggtcaga aggaggagcc cttcttccca ccaccagaag agtttgtgtt cattcatgct
 540
 gtgcctgttg aggagcgtgt acgcactgca gtccctccca agaccataga ggaatgtgag
 600
 gtgattctga tgggtgggact acccggtatct ggaaagaccc agtgggcact gaaatatgca
 660
 aaagaaaacc ctgagaaaag atacaatgtc ctgggagctg agactgtgct caatcaaagt
 720
 aggatgaagg gtctcgagga gccagagatg gaccccaaaa gccgagacct tttagttcag
 780
 caagcctccc agtgccttag taagctggtc cagattgctt cccggacaaa gaggaacttt
 840
 attcttgatc agtgtaatgt gtacaattct ggccaacggc ggaagctatt gctgttcaag
 900
 accttctctc ggaaagtggg ggtggttgtc cctaattgagg aaga
 944

<210> 3244

<211> 314

<212> PRT

<213> Homo sapiens

<400> 3244

Asp	Leu	His	Phe	Gln	Val	Ser	Lys	Asp	Arg	Tyr	Gly	Gly	Gln	Pro	Leu
1				5				10						15	
Phe	Ser	Glu	Lys	Phe	Pro	Thr	Leu	Trp	Ser	Gly	Ala	Arg	Ser	Thr	Tyr
			20					25					30		
Gly	Val	Thr	Lys	Gly	Lys	Val	Cys	Phe	Glu	Ala	Lys	Val	Thr	Gln	Asn
			35				40					45			
Leu	Pro	Met	Lys	Glu	Gly	Cys	Thr	Glu	Val	Ser	Leu	Leu	Arg	Val	Gly
	50					55					60				
Trp	Ser	Val	Asp	Phe	Ser	Arg	Pro	Gln	Leu	Gly	Glu	Asp	Glu	Phe	Ser
65					70				75					80	
Tyr	Gly	Phe	Asp	Gly	Arg	Gly	Leu	Lys	Ala	Glu	Asn	Gly	Gln	Phe	Glu
				85					90					95	
Glu	Phe	Gly	Gln	Thr	Phe	Gly	Glu	Asn	Asp	Val	Ile	Gly	Cys	Phe	Ala
			100					105					110		
Asn	Phe	Glu	Thr	Glu	Glu	Val	Glu	Leu	Ser	Phe	Ser	Lys	Asn	Gly	Glu
		115					120					125			
Asp	Leu	Gly	Val	Ala	Phe	Trp	Ile	Ser	Lys	Asp	Ser	Leu	Ala	Asp	Arg
	130					135					140				
Ala	Leu	Leu	Pro	His	Val	Leu	Cys	Lys	Asn	Cys	Val	Val	Glu	Leu	Asn
145				150					155					160	
Phe	Gly	Gln	Lys	Glu	Glu	Pro	Phe	Phe	Pro	Pro	Pro	Glu	Glu	Phe	Val
			165					170						175	
Phe	Ile	His	Ala	Val	Pro	Val	Glu	Glu	Arg	Val	Arg	Thr	Ala	Val	Pro
			180					185					190		
Pro	Lys	Thr	Ile	Glu	Glu	Cys	Glu	Val	Ile	Leu	Met	Val	Gly	Leu	Pro

```
<210> 3245
<211> 980
<212> DNA
<213> Homo sapiens
```

```

<400> 3245
tggtatgagg gttctccctc caggccggga ctgacaccac tggccaggaa gtggctgaag
60
ctcagctgga tgaggatggg gatttggacg tggtgagaag accacgagcc gcctctgatt
120
ccaacccagc agggcctctg agagacaagg tacatcccat gattctagca caggaagaag
180
acgacgtcct gggagaggaa gcacaaggca gcccgcacga tatcatcaga ataggtgtgg
240
cggggcgccc tgctcctggc agactacatc ctgttccgac aggacctctt ccgaggatgt
300
acagcgctgg agctcggggc cggcacgggg ctcgctagca tcatcgagc caccatggca
360
cggaccgttt attgtacaga tgtcggtgca gatcttttgt ccatgtgcca gcgaaacatt
420
gccctcaaca gccacctggc tgccactgga ggtggtatag ttagggtaa agaactggac
480
tggtgaagg acgacctctg cacagatccc aagggtcccct tcagttggtc acaagaggaa
540
atttctgacc tgtacgatca caccaccatc ctgtttgcag ccgaagtgtt ttacgacgac
600
gacttgactg atgctgtggt taaaacgctc tcccgactcg cccacagatt gaaaaatgcc
660
tgcacagcca tactgtcggg ggagaagagg ctcaacttca cactgagaca cttggacgtc
720
acatgtgaag cctacgatca cttccgctcc tgcctgcacg cgctggagca gctcacagat
780
ggcaagctgc gcttcgtggg ggagcccgtg gaggcctcct tcccacagct cctggtttac
840
gagcgcctcc agcagctgga gctctggaag atcatcgag aaccagtaac atgacccatc
900
gcctccacca ggcgcggcgt ctcgactgtt cttagagtgt atttctagta aaatcagaag
960

```

ctcaccaaag caaaaaaaaaa
980

<210> 3246

<211> 219

<212> PRT

<213> Homo sapiens

<400> 3246

```

Val Trp Arg Gly Ala Leu Leu Leu Ala Asp Tyr Ile Leu Phe Arg Gln
 1             5             10             15
Asp Leu Phe Arg Gly Cys Thr Ala Leu Glu Leu Gly Ala Gly Thr Gly
 20             25             30
Leu Ala Ser Ile Ile Ala Ala Thr Met Ala Arg Thr Val Tyr Cys Thr
 35             40             45
Asp Val Gly Ala Asp Leu Leu Ser Met Cys Gln Arg Asn Ile Ala Leu
 50             55             60
Asn Ser His Leu Ala Ala Thr Gly Gly Gly Ile Val Arg Val Lys Glu
 65             70             75             80
Leu Asp Trp Leu Lys Asp Asp Leu Cys Thr Asp Pro Lys Val Pro Phe
 85             90             95
Ser Trp Ser Gln Glu Glu Ile Ser Asp Leu Tyr Asp His Thr Thr Ile
100            105            110
Leu Phe Ala Ala Glu Val Phe Tyr Asp Asp Asp Leu Thr Asp Ala Val
115            120            125
Phe Lys Thr Leu Ser Arg Leu Ala His Arg Leu Lys Asn Ala Cys Thr
130            135            140
Ala Ile Leu Ser Val Glu Lys Arg Leu Asn Phe Thr Leu Arg His Leu
145            150            155            160
Asp Val Thr Cys Glu Ala Tyr Asp His Phe Arg Ser Cys Leu His Ala
165            170            175
Leu Glu Gln Leu Thr Asp Gly Lys Leu Arg Phe Val Val Glu Pro Val
180            185            190
Glu Ala Ser Phe Pro Gln Leu Leu Val Tyr Glu Arg Leu Gln Gln Leu
195            200            205
Glu Leu Trp Lys Ile Ile Ala Glu Pro Val Thr
210            215

```

<210> 3247

<211> 977

<212> DNA

<213> Homo sapiens

<400> 3247

```

ntctagaacc cagccctgtg gaagtatgtg cggcccaggg gctgtgtgct ggagtgggta
60
cgcaacatcg tggccaaccg cctggcctcg gatggggcca cctgggcaga catcttcaag
120
aggttcaaca gcggcacgta taacaaccag tggatgatcg tggactacaa ggcgttcate
180
ccgggtgggc ccagccccgg gagccgggtg cttaccatcc tggagcagat ccccggcacg
240
gtgggtgggtg ctgacaagac ctcggagctc taccagaaga cctactgggc cagctacaac
300

```

atacgctcct tcgagactgt gttcaatgcc agtgggctgc aggccttagt ggcccagtat
 360
 ggggactggg tttcttatga cgggagcccc cgggcccaga tcttcgggcg gaaccagtca
 420
 ctggtacaag acatggactc catggtcagg ctgatgaggt acaatgactt cctccatgac
 480
 cctctgtcac tgtgcaaage ctgcaacccc cagcccaatg gggagaatgc tatctccgcc
 540
 cgctccgacc tcaaccgggc caatggctcc tacccttcc aggcctacg tcagegctcc
 600
 catgggggta tcgatgtgaa ggtgaccagc atgtcactgg ccaggatcct gagcctgctg
 660
 gcggccagcg gtcccacgtg ggaccagggtg cccccgttcc agtggagcac ctgcaccttc
 720
 agcggcctgc tgcacatggg ccagccagac ctctggaagt tcgcgctgt caaggtttca
 780
 tgggactgaa gttctgtccc tgetctgctg ctttcgcccc tgetgacct cgtcagggtc
 840
 acccccgtcc caaggccacc ggacttctaa ctccagcccc tcctgggggc ttcgttctct
 900
 gatctggggg ctgagtcac tcctcctaga gtgggtcacg aacctgatgg ggctcagaac
 960
 tgacccctc tctcccc
 977

<210> 3248

<211> 260

<212> PRT

<213> Homo sapiens

<400> 3248

Asn	Pro	Ala	Leu	Trp	Lys	Tyr	Val	Arg	Pro	Arg	Gly	Cys	Val	Leu	Glu
1				5					10					15	
Trp	Val	Arg	Asn	Ile	Val	Ala	Asn	Arg	Leu	Ala	Ser	Asp	Gly	Ala	Thr
			20					25					30		
Trp	Ala	Asp	Ile	Phe	Lys	Arg	Phe	Asn	Ser	Gly	Thr	Tyr	Asn	Asn	Gln
		35					40					45			
Trp	Met	Ile	Val	Asp	Tyr	Lys	Ala	Phe	Ile	Pro	Gly	Gly	Pro	Ser	Pro
	50					55					60				
Gly	Ser	Arg	Val	Leu	Thr	Ile	Leu	Glu	Gln	Ile	Pro	Gly	Met	Val	Val
65				70					75					80	
Val	Ala	Asp	Lys	Thr	Ser	Glu	Leu	Tyr	Gln	Lys	Thr	Tyr	Trp	Ala	Ser
			85						90					95	
Tyr	Asn	Ile	Pro	Ser	Phe	Glu	Thr	Val	Phe	Asn	Ala	Ser	Gly	Leu	Gln
			100						105				110		
Ala	Leu	Val	Ala	Gln	Tyr	Gly	Asp	Trp	Phe	Ser	Tyr	Asp	Gly	Ser	Pro
		115					120					125			
Arg	Ala	Gln	Ile	Phe	Arg	Arg	Asn	Gln	Ser	Leu	Val	Gln	Asp	Met	Asp
	130					135						140			
Ser	Met	Val	Arg	Leu	Met	Arg	Tyr	Asn	Asp	Phe	Leu	His	Asp	Pro	Leu
145					150					155				160	
Ser	Leu	Cys	Lys	Ala	Cys	Asn	Pro	Gln	Pro	Asn	Gly	Glu	Asn	Ala	Ile
			165						170					175	
Ser	Ala	Arg	Ser	Asp	Leu	Asn	Pro	Ala	Asn	Gly	Ser	Tyr	Pro	Phe	Gln

	180		185		190										
Ala	Leu	Arg	Gln	Arg	Ser	His	Gly	Gly	Ile	Asp	Val	Lys	Val	Thr	Ser
	195						200					205			
Met	Ser	Leu	Ala	Arg	Ile	Leu	Ser	Leu	Leu	Ala	Ala	Ser	Gly	Pro	Thr
	210					215					220				
Trp	Asp	Gln	Val	Pro	Pro	Phe	Gln	Trp	Ser	Thr	Ser	Pro	Phe	Ser	Gly
225					230					235				240	
Leu	Leu	His	Met	Gly	Gln	Pro	Asp	Leu	Trp	Lys	Phe	Ala	Pro	Val	Lys
				245				250					255		
Val	Ser	Trp	Asp												
	260														

<210> 3249

<211> 4487

<212> DNA

<213> Homo sapiens

<400> 3249

```

nngaattctt tgcatttttc tgggtggagaa actgaggctc agagattagg taacttgtct
60
taatcagcag atggcagcac tgggtacttga acccaggctt gtgtgaaccg cccacccct
120
gctcttcact tttatgcttt ccaccagagt aataatggaa atcctggaaa gccttctcct
180
tccccatggg ttcccaactga ttgcttttct ctctctctct cccacccca ctccagggtgc
240
tctggggcca ggtgccaccg gccattgtcc aggcagctgt gtgcaagcca aagaagcatg
300
tggacactgg aagactcctc ggggacagtc ctgcaccgcc tcatccagga gcagctgcgc
360
tacggcaacc tgactgagac gcgcacgctg ctagccatcc agcagcaggc cctgaggggt
420
ggggctggaa ctgggggtac agggagcccc caggcctccc tggagatcct ggccccagag
480
gacagtcagg tgctgcagca ggccaccagg caggagcccc agggccagga gcaccagggc
540
ggtgagaacc acctggcaga gaacaccctc taccggctat gcccacagcc cagcaaggga
600
gaggagctgc ccacctatga ggaggccaaa gccactcgc agtactatgc ggcccagcag
660
gcagggaccc ggccacatgc gggggaccga gatccccgtg gggccccggg aggcagtcgg
720
aggcaggacg aggccctgcg ggagctgagg catgggcacg tgcgctcgtt gagtgaacgg
780
ctccttcagt tgcccttga gaggaacggc gcccgggccc ccagccacat gagctcctcc
840
cacagcttcc cacagctggc ccgcaaccag caggggcccc cactgagggg cccccctgct
900
gagggcccag agtcccagg accccacact cagtaccctc atgttggtact agtcatgag
960
accaccactg ctgtcactga cccacgggtac cgtgcccgcg gcagcccgc cttccagcat
1020
gctgaagtca ggatcctgca ggcccagggtg cctcctgtgt tcctccaaca gcagcagcag
1080

```

taccagtacc tgcagcaatc tcaggagcac cccctcccc caccatccagc tgctctcggc
1140
catggccccc tgagctccct cagtccacct gctgtggagg gccagtgag tgcccaggcc
1200
tcctcagcca cctcgggcag tgcccacctg gccagatgg aggcctgct gaggggagaat
1260
gccaggctgc agagagacaa tgagcggctg cagagggagc tggagagctc tgcggagaag
1320
gctggccgca ttgagaagct ggaaagcgaa atccagcggc tctctgaggc ccatgagagc
1380
ctgaccagag cctcctccaa gcgtgaggcc ctggagaaga ccatgcggaa caagatggac
1440
agtgaatga ggaggctgca agacttcaac cgggatctta gagagagatt ggaatctgca
1500
aatcgccgcc tggcaagcaa gacacaggag gccaggccg gcagtcagga catggtggcc
1560
aagctgcttg ctacagagcta cgaacagcag caggagcaag agaagctgga gcgagagatg
1620
gcactgctgc gcggcgccat cgaggaccag cggcggcgtg ccgagctgct ggagcaggct
1680
ctgggcaatg cgcagggccg ggcagctcga gccgaagagg agctgcgcaa gaagcaggcc
1740
tatgtggaga aagtggagcg gctgcagcag gcgctcgggc agctgcaggc agcctgtgag
1800
aagcgggagc agctggagct gcgtctgcgg actcgcttg agcaggaact caaggccctg
1860
cgtgcacagc agagacaggc aggtgcccc ggtggtagca gtggcagtg tgggtctcca
1920
gagctcagcg ccctgcgact gtcagaacaa ctgcgagaga aggaggagca gatcctggcg
1980
ctggaggccg acatgaccaa gtgggagcag aagtatttg aggaacgtgc catgaggcag
2040
tttgccatgg atgcggctgc cacggctgct gctcagcgtg acaccactct catccgacat
2100
tccccccagc cctcaccag cagcagcttc aatgagggtc tgctcactgg tggccacagg
2160
catcaggaga tggaaagcag gttaaaggctg ctccatgcc agatcctgga gaaggatgca
2220
gtgatcaagg tccttcagca gcgctccagg agagaccctg gcaaggccat ccagggtcc
2280
ctgcggcctg ccaagtcggt gccatctgtt ttcgcggctg cggcagcagg aaccagggc
2340
tggcaagggc tctcttctag tgagcgacaa acagcagacg ccctgctcg gctgactaca
2400
gcagacagag caccacaga ggagccagtg gtcacagctc ccctgctgc ccatgccaaa
2460
cacgggagca gagatgggag caccagact gacggcccc cagacagcac ctccacctgc
2520
ctgccaccgg agcctgacag ccttctgggg tgcagcagta gccagagagc agcctctctg
2580
gactctgtag ctacatccag agtccaggac ttgtcagaca tgggtggagat actgatctga
2640
aggaggtggt gcttcaggac tctgagccat tctctcccct cctctgcctt gtgccactct
2700

cagccatttc agcagccccc tcaaccgctg ctccgtccct tccccagcc agacactcat
2760
tcccattgac catctggtcc caggagctca ggaggaggac cccaggggag aggagagctg
2820
tgagagcacc ggcaccccc aagactctg cttcttagcc cacattctc cgggccttat
2880
ggagaatgag gattcagcct tgacttcttg cccaaggcct gctactgggg tagcaactga
2940
cagctcagaa aggagctgag ctccctctgc cctgccagtt gtcagtcagg caggagggga
3000
gtggctgtgt tggtttgggg aactaatttc caaggacggc tgcccggtga caccaggtgg
3060
actggttcac taatcaagtc agccatattg ttctctggct aagtttggtt ccagccaacg
3120
tcctctgctc ttcagttcct cactgccttc ttgggatact aagacttgaa ttttttgggg
3180
actattaagg gtgttagtct tggagaagac acagcctcac cttctcactt gctgtgggtg
3240
agggggccatt taagtggact gggagacagt gcgcagtttg tatataattc cttttcttgt
3300
ggaacagaag actgaggcct gcaggttccg atgtgtctcc atgggctgtg ctcccccttt
3360
cctactgtca gtttctgaaa cttctgactg gcctcccagt tatgcctcct cctcaagttc
3420
ctggcccgtg gatgttaaag ctgctcgatt cccaggatct cggtgcctt ttcctctatc
3480
ttgagcccta taaatgccc aaggaccccc accaccagcc tcttgaagtg gctccacagc
3540
tcctgtccct ggaacatcct gtcagtttgg tcataaaccc tgagccagat gaaatgagcc
3600
accgtgaaca gacatctgcc atgccccag gtgggcttcg gtggccctac ccggtaccag
3660
ttctctctga gaaactggag atgtcttggt agcataagtg tcttcattcc cacctggagg
3720
gtttgggaga ggagcaaagc agttgaaaac tagttaatga gctacaagag tcaaatagtc
3780
ctctgaatgg agccccatc acaaaacagt gccaggagg ctggctcctc aagctacca
3840
tgccagcgc cctaaagcag gaccagatgc tttggaattg gggtgaaaca cccacatggc
3900
agcctgctag cagcagtgc tttgacttct ggtcttaaag agtcctcac ttcagcccca
3960
ggagctattg gtgggtttta gcagttttgt ctttaccgtt tttagttctc cttgattctt
4020
tgttttcttc ctttatcggt tttaggtttg gtatgtgttg ttttatttcc atggttctc
4080
aagtttcctt tttaaacatt tgcatttgct ggacaattgc aatttttttt aaaaaatttc
4140
cctacccctg tttaaagctg aaaaatacat ttggttcatg tgcattgttt acaaagcaaa
4200
aagaaaaaag aggaaaaaaa ggcaaaaaat attgtgaaag aaaaaaaca acttaatata
4260
ttttggatta atatttggtt tttcttttaa agtatttttt gtgctgtgaa cattttctgc
4320

caaagaccat gatgtgtgtc tgtatgttta agttatcgta aatattttaa atgtaaacat
 4380
 ggctgttttg ttatgccacc ctgtaccagg attgctgccg cattccactg ggtataacag
 4440
 tattttaatt aaaaaataat aattaaaagt gaaaaaaaaa aaaaaaa
 4487

<210> 3250

<211> 849

<212> PRT

<213> Homo sapiens

<400> 3250

Thr	Gln	Ala	Cys	Val	Asn	Arg	Pro	Thr	Pro	Ala	Leu	His	Phe	Tyr	Ala
1				5					10					15	
Phe	His	Gln	Ser	Asn	Asn	Gly	Asn	Pro	Gly	Lys	Pro	Ser	Pro	Phe	Pro
			20					25					30		
Trp	Val	Pro	Thr	Asp	Cys	Phe	Ser	Leu	Ser	Leu	Ser	Pro	Pro	His	Ser
		35					40					45			
Arg	Cys	Ser	Gly	Ala	Arg	Cys	His	Arg	Pro	Leu	Ser	Arg	Gln	Leu	Cys
	50					55					60				
Ala	Ser	Gln	Arg	Ser	Met	Trp	Thr	Leu	Glu	Asp	Ser	Ser	Gly	Thr	Val
65					70					75					80
Leu	His	Arg	Leu	Ile	Gln	Glu	Gln	Leu	Arg	Tyr	Gly	Asn	Leu	Thr	Glu
			85						90					95	
Thr	Arg	Thr	Leu	Ala	Ile	Gln	Gln	Gln	Ala	Leu	Arg	Gly	Gly	Ala	
			100					105					110		
Gly	Thr	Gly	Gly	Thr	Gly	Ser	Pro	Gln	Ala	Ser	Leu	Glu	Ile	Leu	Ala
		115					120					125			
Pro	Glu	Asp	Ser	Gln	Val	Leu	Gln	Gln	Ala	Thr	Arg	Gln	Glu	Pro	Gln
	130					135					140				
Gly	Gln	Glu	His	Gln	Gly	Gly	Glu	Asn	His	Leu	Ala	Glu	Asn	Thr	Leu
145					150					155					160
Tyr	Arg	Leu	Cys	Pro	Gln	Pro	Ser	Lys	Gly	Glu	Glu	Leu	Pro	Thr	Tyr
			165					170						175	
Glu	Glu	Ala	Lys	Ala	His	Ser	Gln	Tyr	Tyr	Ala	Ala	Gln	Gln	Ala	Gly
		180						185					190		
Thr	Arg	Pro	His	Ala	Gly	Asp	Arg	Asp	Pro	Arg	Gly	Ala	Pro	Gly	Gly
		195					200					205			
Ser	Arg	Arg	Gln	Asp	Glu	Ala	Leu	Arg	Glu	Leu	Arg	His	Gly	His	Val
	210					215					220				
Arg	Ser	Leu	Ser	Glu	Arg	Leu	Leu	Gln	Leu	Ser	Leu	Glu	Arg	Asn	Gly
225					230					235					240
Ala	Arg	Ala	Pro	Ser	His	Met	Ser	Ser	Ser	His	Ser	Phe	Pro	Gln	Leu
			245						250					255	
Ala	Arg	Asn	Gln	Gln	Gly	Pro	Pro	Leu	Arg	Gly	Pro	Pro	Ala	Glu	Gly
		260						265					270		
Pro	Glu	Ser	Arg	Gly	Pro	Pro	Pro	Gln	Tyr	Pro	His	Val	Val	Leu	Ala
		275					280					285			
His	Glu	Thr	Thr	Thr	Ala	Val	Thr	Asp	Pro	Arg	Tyr	Arg	Ala	Arg	Gly
	290					295					300				
Ser	Pro	His	Phe	Gln	His	Ala	Glu	Val	Arg	Ile	Leu	Gln	Ala	Gln	Val
305					310					315					320
Pro	Pro	Val	Phe	Leu	Gln	Gln	Gln	Gln	Gln	Tyr	Gln	Tyr	Leu	Gln	Gln

325 330 335
 Ser Gln Glu His Pro Pro Pro Pro His Pro Ala Ala Leu Gly His Gly
 340 345 350
 Pro Leu Ser Ser Leu Ser Pro Pro Ala Val Glu Gly Pro Val Ser Ala
 355 360 365
 Gln Ala Ser Ser Ala Thr Ser Gly Ser Ala His Leu Ala Gln Met Glu
 370 375 380
 Ala Val Leu Arg Glu Asn Ala Arg Leu Gln Arg Asp Asn Glu Arg Leu
 385 390 395 400
 Gln Arg Glu Leu Glu Ser Ser Ala Glu Lys Ala Gly Arg Ile Glu Lys
 405 410 415
 Leu Glu Ser Glu Ile Gln Arg Leu Ser Glu Ala His Glu Ser Leu Thr
 420 425 430
 Arg Ala Ser Ser Lys Arg Glu Ala Leu Glu Lys Thr Met Arg Asn Lys
 435 440 445
 Met Asp Ser Glu Met Arg Arg Leu Gln Asp Phe Asn Arg Asp Leu Arg
 450 455 460
 Glu Arg Leu Glu Ser Ala Asn Arg Arg Leu Ala Ser Lys Thr Gln Glu
 465 470 475 480
 Ala Gln Ala Gly Ser Gln Asp Met Val Ala Lys Leu Leu Ala Gln Ser
 485 490 495
 Tyr Glu Gln Gln Gln Glu Gln Glu Lys Leu Glu Arg Glu Met Ala Leu
 500 505 510
 Leu Arg Gly Ala Ile Glu Asp Gln Arg Arg Arg Ala Glu Leu Leu Glu
 515 520 525
 Gln Ala Leu Gly Asn Ala Gln Gly Arg Ala Ala Arg Ala Glu Glu Glu
 530 535 540
 Leu Arg Lys Lys Gln Ala Tyr Val Glu Lys Val Glu Arg Leu Gln Gln
 545 550 555 560
 Ala Leu Gly Gln Leu Gln Ala Ala Cys Glu Lys Arg Glu Gln Leu Glu
 565 570 575
 Leu Arg Leu Arg Thr Arg Leu Glu Gln Glu Leu Lys Ala Leu Arg Ala
 580 585 590
 Gln Gln Arg Gln Ala Gly Ala Pro Gly Gly Ser Ser Gly Ser Gly Gly
 595 600 605
 Ser Pro Glu Leu Ser Ala Leu Arg Leu Ser Glu Gln Leu Arg Glu Lys
 610 615 620
 Glu Glu Gln Ile Leu Ala Leu Glu Ala Asp Met Thr Lys Trp Glu Gln
 625 630 635 640
 Lys Tyr Leu Glu Glu Arg Ala Met Arg Gln Phe Ala Met Asp Ala Ala
 645 650 655
 Ala Thr Ala Ala Ala Gln Arg Asp Thr Thr Leu Ile Arg His Ser Pro
 660 665 670
 Gln Pro Ser Pro Ser Ser Ser Phe Asn Glu Gly Leu Leu Thr Gly Gly
 675 680 685
 His Arg His Gln Glu Met Glu Ser Arg Leu Lys Val Leu His Ala Gln
 690 695 700
 Ile Leu Glu Lys Asp Ala Val Ile Lys Val Leu Gln Gln Arg Ser Arg
 705 710 715 720
 Arg Asp Pro Gly Lys Ala Ile Gln Gly Ser Leu Arg Pro Ala Lys Ser
 725 730 735
 Val Pro Ser Val Phe Ala Ala Ala Ala Gly Thr Gln Gly Trp Gln
 740 745 750
 Gly Leu Ser Ser Ser Glu Arg Gln Thr Ala Asp Ala Pro Ala Arg Leu

<400>	3251				
acgcgtggaa	cggcgtagag	aagagcttta	tcgtcaatat	tttgaggaaa	tccagagacg
60					
ctttgatgcc	gaaaggccgt	tgattgttct	gtgattgtgg	tcaacaaaca	gacaaaagac
120					
tatgctgagt	ctgtggggcg	gaagggtgcga	gacctaggca	tggtagtgga	cttgatcttc
180					
cttaacacag	aagtgtcact	gtcacaagcc	ttggagggatg	ttagcagggg	aggttctcct
240					
tttgctattg	tcatcaccca	gcaacaccag	attcaccgct	cctgcacagt	caacatcatg
300					
tttggaaacc	cgcaagagca	tcgcaacatg	ccccaagcag	atgccatggt	gctgggtggcc
360					
agaaattatg	agcgttacaa	gaatgagtgc	cggggagaagg	aacgtgagga	gattgccaga
420					
caggcagcca	agatggccga	tgaagccatc	ctgcaggaaa	gagagagagg	aggccctgag
480					
gagggagtgc	gtggggggcca	ccctccagcc	atccagagcc	tcatcaacct	gctggcagac
540					
aacagggtacc	tcactgctga	agagactgac	aagatcatca	actacctgcg	agagcggaag
600					
gagcggctga	tgaggagcag	caccgactct	ctgcctgggtg	agctacgtgg	caggccgagg
660					
cccgatattc	cgccaaccac	tcggggcgac	ctcgggtgcc	tcgctgaaga	cacagccaag
720					
ctcccaaccg	ctccagagcg	gccaagtgct	cccctctgct	acacccactc	catctgcacc
780					
ccccacctcc	cagcaagagc	ttcaggccaa	aatcctcagc	ctcttcaata	gtggcacagt
840					
gacggccaat	agcagctctg	catccccctc	ggttgctgcc	ggaaacaccc	caaaccagaa
900					
tttttccaca	gcagcaaaca	gccagcctca	acaaagatca	caggcttctg	gcaatcagcc
960					
tccaagcatt	ttgggacagg	gaggatctgc	tcagaacatg	ggccccagac	ctggggctcc
1020					

ttcccaaggg ctttttggcc agccttccag tgcctggca cctgctagca acatgactag
1080
ccagaggcct gtgtcttcca caggtatcaa ctttgacaat ccaagtgtac agaaggctct
1140
ggataccctg atccagagtg gccctgctct ctcccacctg gttagccaga ccacagcaca
1200
gatggggcag ccacaggccc ccattgggac ttaccagagg cattactgaa gctaaatctt
1260
tcaactctcc ccagtccctt catcccttgg cctcctccca cttacttggt ctaaataagag
1320
ctgtttggag gatgttctct gcgctcccag gccggcatcg agtgtcatca atttctacca
1380
cctgctctct cttctgcccc aggtgtgtgt gcttattcct tacaaagttt atactgcatt
1440
tggggctgta tctttttttg ttttttggtt tgtagaaaat aaatatctcc gggggcagta
1500
caggtgtctg ggcttgtatt tgatgggggt tctccggctc ctgtttctac tggatttgga
1560
gccaggccca gctagccaag tttggaatgg catttgtcat gtcagtagcc accaccttgg
1620
ttcattgtga acctaccaag gctttccagc ttcatacaca ttgaccagag ctcaagctcc
1680
tgcctgcaac tcctgcctag agttgaagaa aagcaaactg gccttggcag gcacagtgtc
1740
atcataccct caccatata gtttgggggtc tgcttgagga ttcataaatc agccactctg
1800
gattgttgag gaatggccat ggcagccaca gaaaaaagaa tttttctctc tgagccaagg
1860
ttgttttttg tttttttctc tttttttttt tgttttcatt tcattggaag atctccaatg
1920
gactgaacag ctccagtcag cagcagttac cacaaactgt gaatctgggc ccaccactc
1980
ttccctgtta accagttctg tcagcatccc cctctccagc agcacttcca tgaagttggt
2040
tctgagactc tggccgtgaa caccogtttc ttcagtgtat tgttttgggc ttttggtc
2100
aaaccccagg ctcttgtttt tgtctagact cttattctgt ttctgagca gcaggaggta
2160
gggaccactt tgatgtcaga cttctggtag ctggacatgt tctcgagatg ggtggctgtt
2220
cgcgactttt gtaccagagt gaaattgtta gaaggagggt ttctggctgt ggttctaaat
2280
ggagccccag gaagctgccc tctcccagg gtttgtgtc agtagagccc tgtggatcac
2340
agtcttgagg tcctctagca ggggtgaggg agagcagcga cttcagctga gtccctgcc
2400
gtggttaagc aaacaatggt ttcaaaattc aaggtcccca aatggcagca ttttatgttc
2460
tgacctgttt gtgttatata gtggtttttt ttttctctt tggaactctt gtgttgtaa
2520
taaaatgaaa tgattacttt ttaattaaaa tgaaaaaaaa aaaaaaaaaa aaaaaaaaaa
2580
aaaaaaaaaa aaaaa
2595

<210> 3252
 <211> 254
 <212> PRT
 <213> Homo sapiens

<400> 3252
 Cys Arg Lys Ala Val Asp Cys Ser Val Ile Val Val Asn Lys Gln Thr
 1 5 10 15
 Lys Asp Tyr Ala Glu Ser Val Gly Arg Lys Val Arg Asp Leu Gly Met
 20 25 30
 Val Val Asp Leu Ile Phe Leu Asn Thr Glu Val Ser Leu Ser Gln Ala
 35 40 45
 Leu Glu Asp Val Ser Arg Gly Gly Ser Pro Phe Ala Ile Val Ile Thr
 50 55 60
 Gln Gln His Gln Ile His Arg Ser Cys Thr Val Asn Ile Met Phe Gly
 65 70 75 80
 Thr Pro Gln Glu His Arg Asn Met Pro Gln Ala Asp Ala Met Val Leu
 85 90 95
 Val Ala Arg Asn Tyr Glu Arg Tyr Lys Asn Glu Cys Arg Glu Lys Glu
 100 105 110
 Arg Glu Glu Ile Ala Arg Gln Ala Lys Met Ala Asp Glu Ala Ile
 115 120 125
 Leu Gln Glu Arg Glu Arg Gly Gly Pro Glu Glu Gly Val Arg Gly Gly
 130 135 140
 His Pro Pro Ala Ile Gln Ser Leu Ile Asn Leu Leu Ala Asp Asn Arg
 145 150 155 160
 Tyr Leu Thr Ala Glu Glu Thr Asp Lys Ile Ile Asn Tyr Leu Arg Glu
 165 170 175
 Arg Lys Glu Arg Leu Met Arg Ser Ser Thr Asp Ser Leu Pro Gly Glu
 180 185 190
 Leu Arg Gly Arg Pro Arg Pro Asp Phe Pro Pro Thr Thr Arg Gly Asp
 195 200 205
 Leu Gly Cys Leu Ala Glu Asp Thr Ala Lys Leu Pro Thr Ala Pro Glu
 210 215 220
 Arg Pro Ser Ala Pro Leu Cys Tyr Thr His Ser Ile Cys Thr Pro His
 225 230 235 240
 Leu Pro Ala Arg Ala Ser Gly Gln Asn Pro Gln Pro Leu Gln
 245 250

<210> 3253
 <211> 686
 <212> DNA
 <213> Homo sapiens

<400> 3253
 ttttgcagtt ggaacatctt tccagtttta ttttcagttc tcctctctgc actccaaggt
 60
 cataggattt ccacatgccc ttggaagagc ctttgaagg tattttcatc cttcctactg
 120
 gtaaaatggc atcaagggtc cccaccgggt caagatgggg accttgacta tatggcaatg
 180
 aagacagggg caccctggca gtagcaggta gcctttggcc atctctgcag caggctggtg
 240

tttgggatcc acgaggcacg gaaagtcagc actctggagg acctggttgg ggtcacccctg
 300
 ggccaggtgc agatcgtggg aagctggata tgtgaaatgg caggtgctgg tgaacttgcg
 360
 ctgctcctcc ctgctggcct catgttctcg tgatgggaag aagccgggga gtcccaggtc
 420
 tttggcagtc atgtgggggc ttttgaaagc agggtagcca tctgttagct tgggggttggg
 480
 gttagggatg ggcctgtaaa actctttgtc ccggagttga gcatcgagct ttgcctgctc
 540
 ttgcggcgtg accctggagt atttgtgctt cctgtagggc tgatagtcga ccatgtggga
 600
 gctttggtat atgtctaaat ccacaggggc ctgtcccggg tatttcacac ctgccatggc
 660
 aaacgacaga cagcttctct cctagg
 686

<210> 3254

<211> 180

<212> PRT

<213> Homo sapiens

<400> 3254

Met	Ala	Gly	Val	Lys	Tyr	Pro	Gly	Gln	Asp	Pro	Val	Asp	Leu	Asp	Ile
1				5				10					15		
Tyr	Gln	Ser	Ser	His	Met	Val	Asp	Tyr	Gln	Pro	Tyr	Arg	Lys	His	Lys
		20					25					30			
Tyr	Ser	Arg	Val	Thr	Pro	Gln	Glu	Gln	Ala	Lys	Leu	Asp	Ala	Gln	Leu
		35				40					45				
Arg	Asp	Lys	Glu	Phe	Tyr	Arg	Pro	Ile	Pro	Asn	Pro	Asn	Pro	Lys	Leu
	50				55				60						
Thr	Asp	Gly	Tyr	Pro	Ala	Phe	Lys	Arg	Pro	His	Met	Thr	Ala	Lys	Asp
65				70				75						80	
Leu	Gly	Leu	Pro	Gly	Phe	Phe	Pro	Ser	Gln	Glu	His	Glu	Ala	Thr	Arg
			85					90						95	
Glu	Asp	Glu	Arg	Lys	Phe	Thr	Ser	Thr	Cys	His	Phe	Thr	Tyr	Pro	Ala
		100					105						110		
Ser	His	Asp	Leu	His	Leu	Ala	Gln	Gly	Asp	Pro	Asn	Gln	Val	Leu	Gln
	115					120					125				
Ser	Ala	Asp	Phe	Pro	Cys	Leu	Val	Asp	Pro	Lys	His	Gln	Pro	Ala	Ala
	130				135					140					
Glu	Met	Ala	Lys	Gly	Tyr	Leu	Leu	Leu	Pro	Gly	Cys	Pro	Cys	Leu	His
145				150				155						160	
Cys	His	Ile	Val	Lys	Val	Pro	Ile	Leu	Asn	Arg	Trp	Gly	Pro	Leu	Met
			165				170							175	
Pro	Phe	Tyr	Gln												
			180												

<210> 3255

<211> 724

<212> DNA

<213> Homo sapiens

<400> 3255

nntgtacatg cgtgtgcgtc tgtgattgtg tgggtgtgtg atagtgtagg ggagccagga
 60
 gcgagaggag aggacggcga tcgtagggga cacctgagag tcagaggccc gagggggctg
 120
 ggactcatgt cgaggctcggg gaaggatgta aaacccggac ggacatcact gtaggccgca
 180
 cctgctgaga ggccagagct gcctccttga gagtgaagtt gtttacagac aagagaagag
 240
 atcttgggcg acacatcaca gctagccgag aatcccgaag ggtcagcaga gcctagaaag
 300
 gaatatgagg ggggtcggaa tgaggcaggc gaaaggcacg gacgtgggag ggcacggcta
 360
 cccaacgggg acacctacga agggagctac gaattcggta aaagacatgg ccaggggatc
 420
 tacaaattta aaaatggtgc tcgatataac ggagaatatg ttagaaataa aaagcacggt
 480
 caaggcactt ttatatatcc agatggatcc agatatgaag gagagtgggc aaatgacctg
 540
 cggcacggcc atggcgata ctactacatc aataatgaca cctacactgg agagtgggtt
 600
 gctcatcaaa ggcattggga aggcacctat ttatacgag agacgggcag taagtatgtt
 660
 ggcacctggg tgaacggaca gcaggagggc acggccgagc tcattcacct gaaccacagg
 720
 tacc
 724

<210> 3256

<211> 169

<212> PRT

<213> Homo sapiens

<400> 3256

Ser	Cys	Leu	Gln	Thr	Arg	Glu	Glu	Ile	Leu	Ala	Asp	Thr	Ser	Gln	Leu
1				5					10					15	
Ala	Ala	Asn	Pro	Glu	Gly	Ser	Ala	Glu	Pro	Arg	Lys	Glu	Tyr	Glu	Gly
		20						25				30			
Gly	Arg	Asn	Glu	Ala	Gly	Glu	Arg	His	Gly	Arg	Gly	Arg	Ala	Arg	Leu
		35					40				45				
Pro	Asn	Gly	Asp	Thr	Tyr	Glu	Gly	Ser	Tyr	Glu	Phe	Gly	Lys	Arg	His
	50					55				60					
Gly	Gln	Gly	Ile	Tyr	Lys	Phe	Lys	Asn	Gly	Ala	Arg	Tyr	Ile	Gly	Glu
65					70				75					80	
Tyr	Val	Arg	Asn	Lys	Lys	His	Gly	Gln	Gly	Thr	Phe	Ile	Tyr	Pro	Asp
			85					90						95	
Gly	Ser	Arg	Tyr	Glu	Gly	Glu	Trp	Ala	Asn	Asp	Leu	Arg	His	Gly	His
		100						105					110		
Gly	Val	Tyr	Tyr	Tyr	Ile	Asn	Asn	Asp	Thr	Tyr	Thr	Gly	Glu	Trp	Phe
		115					120					125			
Ala	His	Gln	Arg	His	Gly	Gln	Gly	Thr	Tyr	Leu	Tyr	Ala	Glu	Thr	Gly
	130					135				140					
Ser	Lys	Tyr	Val	Gly	Thr	Trp	Val	Asn	Gly	Gln	Gln	Glu	Gly	Thr	Ala
145					150				155					160	
Glu	Leu	Ile	His	Leu	Asn	His	Arg	Tyr							

165

<210> 3257
 <211> 368
 <212> DNA
 <213> Homo sapiens

<400> 3257
 nccccggggg acatagactc cccacactac agccggcagg gcatgtcccc caccttctcc
 60
 cgctcacctc accactacta ccgctctggt gatttgtcta cagcaaccaa gagcgaaaca
 120
 agtgaagaca tcagccagac ctccaagtac agtcccatct actcgccaga cccctactat
 180
 gcttcggagt ctgagtactg gacctaccat ggggtcccca aagtgtcccg agccagaagg
 240
 ttctcgtctg gaggagagga ggatgatttt gaccgcagca tgcacaagct ccaaagtgga
 300
 attggccggc tgattctgaa ggaagaaatg aaggcccggg cgagctccta tgcagatccc
 360
 tggcgcgc
 368

<210> 3258
 <211> 122
 <212> PRT
 <213> Homo sapiens

<400> 3258
 Xaa Pro Gly Tyr Ile Asp Ser Pro Thr Tyr Ser Arg Gln Gly Met Ser
 1 5 10 15
 Pro Thr Phe Ser Arg Ser Pro His His Tyr Tyr Arg Ser Gly Asp Leu
 20 25 30
 Ser Thr Ala Thr Lys Ser Glu Thr Ser Glu Asp Ile Ser Gln Thr Ser
 35 40 45
 Lys Tyr Ser Pro Ile Tyr Ser Pro Asp Pro Tyr Tyr Ala Ser Glu Ser
 50 55 60
 Glu Tyr Trp Thr Tyr His Gly Ser Pro Lys Val Pro Arg Ala Arg Arg
 65 70 75 80
 Phe Ser Ser Gly Gly Glu Glu Asp Asp Phe Asp Arg Ser Met His Lys
 85 90 95
 Leu Gln Ser Gly Ile Gly Arg Leu Ile Leu Lys Glu Glu Met Lys Ala
 100 105 110
 Arg Ser Ser Ser Tyr Ala Asp Pro Trp Arg
 115 120

<210> 3259
 <211> 747
 <212> DNA
 <213> Homo sapiens

<400> 3259
 acgcgtgaag ggcgcaccct ctgctgcagc actggccacc ccggacacgc tgcagggcca
 60

2458

gtgctcagcc ttcttacagc tctgggccgg cctgcagccc atcttgtgtg gcaacaaccg
 120
 caccattgaa cccggagcgc tgcggcgggg caacatgagc tccctgggct ttacgagcaa
 180
 ggagcagcgg aacctggggc ttctcgtgca cctcatgacc agcaacccca aaatcctgta
 240
 cgcgcctgcg ggctctgagg tcgaccgcgt catcctcaag gccaacgaga cttttgcttt
 300
 tgtgggcaac gtgactcaat atgcccaggt ctggctcaac atctcggcgg agatccgcag
 360
 cttcctggag cagggcaggc tgcagcaaca cctgcgctgg ctgcagcagt atgtagcaga
 420
 gctgcggctg caccctgagg cactgaacct gtcactggat gagctgccgc cggccctgag
 480
 acaggacaac ttctcgtgct ccagtggcat ggccctcctg cagcagctgg ataccattga
 540
 caacgcggcc tgcggctgga tccagttcat gtccaagggt agcgtggaca tcttcaaggg
 600
 cttccctgac gaggagagca ttgtcaacta caccctcaac caggcctacc aggacaacgt
 660
 cactgttttt gccagtgtga tcttccagac ccggaaggac ggctcgtccc gcctcacgtg
 720
 cactacaaga tccgccagaa ctccagc
 747

<210> 3260

<211> 197

<212> PRT

<213> Homo sapiens

<400> 3260

Met	Ser	Ser	Leu	Gly	Phe	Thr	Ser	Lys	Glu	Gln	Arg	Asn	Leu	Gly	Leu
1				5					10					15	
Leu	Val	His	Leu	Met	Thr	Ser	Asn	Pro	Lys	Ile	Leu	Tyr	Ala	Pro	Ala
			20					25					30		
Gly	Ser	Glu	Val	Asp	Arg	Val	Ile	Leu	Lys	Ala	Asn	Glu	Thr	Phe	Ala
		35					40					45			
Phe	Val	Gly	Asn	Val	Thr	His	Tyr	Ala	Gln	Val	Trp	Leu	Asn	Ile	Ser
	50					55					60				
Ala	Glu	Ile	Arg	Ser	Phe	Leu	Glu	Gln	Gly	Arg	Leu	Gln	Gln	His	Leu
65					70					75				80	
Arg	Trp	Leu	Gln	Gln	Tyr	Val	Ala	Glu	Leu	Arg	Leu	His	Pro	Glu	Ala
			85						90					95	
Leu	Asn	Leu	Ser	Leu	Asp	Glu	Leu	Pro	Pro	Ala	Leu	Arg	Gln	Asp	Asn
			100					105					110		
Phe	Ser	Leu	Pro	Ser	Gly	Met	Ala	Leu	Leu	Gln	Gln	Leu	Asp	Thr	Ile
			115				120					125			
Asp	Asn	Ala	Ala	Cys	Gly	Trp	Ile	Gln	Phe	Met	Ser	Lys	Val	Ser	Val
	130					135					140				
Asp	Ile	Phe	Lys	Gly	Phe	Pro	Asp	Glu	Glu	Ser	Ile	Val	Asn	Tyr	Thr
145					150					155				160	
Leu	Asn	Gln	Ala	Tyr	Gln	Asp	Asn	Val	Thr	Val	Phe	Ala	Ser	Val	Ile
			165					170					175		
Phe	Gln	Thr	Arg	Lys	Asp	Gly	Ser	Ser	Arg	Leu	Thr	Cys	Thr	Thr	Arg

180
Ser Ala Arg Thr Pro
195

185

190

<210> 3261
<211> 1323
<212> DNA
<213> Homo sapiens

<400> 3261
nnacgcgtac agccaccttc cttaccgccg gccctgccgg gagcctgctt cttatcattt
60
gcacctcatt gctttcctca cctgccatct cacacgtggc tgccctgtgt tgccctgtg
120
tgctgtgccca attgtgtttt tttgctctgt gtacattttg gttttatttg gggttgctgt
180
tgatgatttc ctttgttccg gtgttctgtc tcccctcgct ggctgtgtgg gggctgcctg
240
gcccgctgct tgccgcctcc atagatcccc gttgcgcagc catctgtcat ggacgacatt
300
gaggtgtggc tcaggaccga cctgaagggt gatgatctgg aggaggggtgt cacaagtga
360
gagtttgata aattccttga agaaagagcc aaagctgctg aaatgggtcc cgacctcccc
420
tcgcccccca tggaggctcc tgccccagcc tcaaaccctt ctggccggaa gaagccagag
480
cggtcagagg atgcccctct cgccctgtga gcagctctgt ggtttgccct cccagatggc
540
gggtccccgc ttgcaccccg tggacaccgg gcaactggcca ctctacatc cccagctcca
600
cacggcctgc acacctgtgt ttccatggaa atgccaccgt gtctgctccc aggcctccca
660
ctagtcagga ccagcttcag ccacttcttt tctctgagt gtgggacaac tgcagccaga
720
gactctctcc cctcccacca tgggcccctc tgcccatgtt tctcccagg aagagcgggc
780
agagtggccc agccccaggc agtgcttctt gagcagacca cccggactgt ctttctccca
840
ccgcccctg gagaaagagc acgcccggcc ccgcccgtg ctcacctctg cctggctcag
900
tgaccttctc aggcattctg cctcctggg cccctctctc cctgaagggg ctttgtggca
960
tctctggaag agcaggggtgt gctgcactca tgggcctggt ctactcctt ggacttgtca
1020
ccttgtgaca tttggcttac cagcatttga gaaggctctg ctgggtctcc atgggtgggg
1080
tctctcacct tcttgacct ctctccatca ttcagctgcc agcccaggct tcacacccaa
1140
gctggctcag cagccgagcc tggcaccgag ggtccctgca ggctccctgg gcagggagag
1200
ggccaaggac aattgggagg gcagcaggca gcccgcagat ggtggccatg tggcacgctg
1260
ctgagacgac actaccaata aaccaaactg ccacgcacaa aaaaaaaaaa aaaaaaaaaa
1320

aaa
1323

<210> 3262
<211> 81
<212> PRT
<213> Homo sapiens

<400> 3262
Ile Pro Val Ala Gln Pro Ser Val Met Asp Asp Ile Glu Val Trp Leu
1 5 10 15
Arg Thr Asp Leu Lys Gly Asp Asp Leu Glu Glu Gly Val Thr Ser Glu
20 25 30
Glu Phe Asp Lys Phe Leu Glu Glu Arg Ala Lys Ala Ala Glu Met Val
35 40 45
Pro Asp Leu Pro Ser Pro Pro Met Glu Ala Pro Ala Pro Ala Ser Asn
50 55 60
Pro Ser Gly Arg Lys Lys Pro Glu Arg Ser Glu Asp Ala Leu Phe Ala
65 70 75 80
Leu

<210> 3263
<211> 1128
<212> DNA
<213> Homo sapiens

<400> 3263
agccgctacc gccgcagcag cggggacgag ctcagggagg acgatgagcc cgtcaagaag
60
cggggacgca agggccgggg cgggggtccc ccgtcctcct ctgactccga gcccgaggcc
120
gagctggaga gagaggccaa gaaatcagcg aagaagccgc agtcctcaag cacagagccc
180
gccaggaaac ctggccagaa ggagaagaga gtgcggcccc aggagaagca acaagccaag
240
cccgtgaagg tggagcggac ccggaagcgg tccgagggct tctcgatgga caggaaggta
300
gagaagaaga aagagccctc cgtggaggag aagctgcaga agctgcacag tgagatcaag
360
tttgccctaa aggtcgacag cccggacgtg aaggggtgcc tgaatgcct agaggagctg
420
ggaaccctgc aggtgacctc tcagatcctc cagaagaaca cagacgtggt ggccaccttg
480
aagaagattc gccgttacaa agcgaacaag gacgtaatgg agaaggcagc agaagtctat
540
acccggctca agtcgcgggt cctcggccca aagatcgagg cgggtgcagaa agtgaacaag
600
gctgggatgg agaaggagaa ggccgaggag aagctggccg gggaggagct ggccggggag
660
gaggcccccc aggagaaggc ggaggacaag cccagcaccg atctctcagc cccagtgaat
720
ggcgaggcca catcacagaa gggggagagc gcagaggaca aggagcacga ggagggtcgg
780

gactcggagg aggggccaag gtgtggctcc tctgaagacc tgcacgacag cgtacgggag
 840
 ggtcccagacc tggacaggcc tgggagcgac cggcaggagc gcgagagggc acgggggggac
 900
 tcggaggccc tggacgagga gagctgagcc gcgggcagcc agggcccagcc cccgcccag
 960
 ctcaggctgc ccctctcctt ccccggtctg caggagagca gagcagagaa ctgtggggaa
 1020
 cgctgtgctg tttgtatttg ttcccttggg ttttttttct ctgcctaatt tctgtgattt
 1080
 ccaaccaaca tgaaatgact ataaatggtt tttttaatga aaaaaaaaa
 1128

<210> 3264
 <211> 308
 <212> PRT
 <213> Homo sapiens

<400> 3264
 Ser Arg Tyr Arg Arg Ser Ser Gly Asp Glu Leu Arg Glu Asp Asp Glu
 1 5 10 15
 Pro Val Lys Lys Arg Gly Arg Lys Gly Arg Gly Arg Gly Pro Pro Ser
 20 25 30
 Ser Ser Asp Ser Glu Pro Glu Ala Glu Leu Glu Arg Glu Ala Lys Lys
 35 40 45
 Ser Ala Lys Lys Pro Gln Ser Ser Ser Thr Glu Pro Ala Arg Lys Pro
 50 55 60
 Gly Gln Lys Glu Lys Arg Val Arg Pro Glu Glu Lys Gln Gln Ala Lys
 65 70 75 80
 Pro Val Lys Val Glu Arg Thr Arg Lys Arg Ser Glu Gly Phe Ser Met
 85 90 95
 Asp Arg Lys Val Glu Lys Lys Lys Glu Pro Ser Val Glu Glu Lys Leu
 100 105 110
 Gln Lys Leu His Ser Glu Ile Lys Phe Ala Leu Lys Val Asp Ser Pro
 115 120 125
 Asp Val Lys Gly Cys Leu Asn Ala Leu Glu Glu Leu Gly Thr Leu Gln
 130 135 140
 Val Thr Ser Gln Ile Leu Gln Lys Asn Thr Asp Val Val Ala Thr Leu
 145 150 155 160
 Lys Lys Ile Arg Arg Tyr Lys Ala Asn Lys Asp Val Met Glu Lys Ala
 165 170 175
 Ala Glu Val Tyr Thr Arg Leu Lys Ser Arg Val Leu Gly Pro Lys Ile
 180 185 190
 Glu Ala Val Gln Lys Val Asn Lys Ala Gly Met Glu Lys Glu Lys Ala
 195 200 205
 Glu Glu Lys Leu Ala Gly Glu Glu Leu Ala Gly Glu Glu Ala Pro Gln
 210 215 220
 Glu Lys Ala Glu Asp Lys Pro Ser Thr Asp Leu Ser Ala Pro Val Asn
 225 230 235 240
 Gly Glu Ala Thr Ser Gln Lys Gly Glu Ser Ala Glu Asp Lys Glu His
 245 250 255
 Glu Glu Gly Arg Asp Ser Glu Glu Gly Pro Arg Cys Gly Ser Ser Glu
 260 265 270
 Asp Leu His Asp Ser Val Arg Glu Gly Pro Asp Leu Asp Arg Pro Gly

275 280 285
 Ser Asp Arg Gln Glu Arg Glu Arg Ala Arg Gly Asp Ser Glu Ala Leu
 290 295 300
 Asp Glu Glu Ser
 305

<210> 3265
 <211> 524
 <212> DNA
 <213> Homo sapiens

<400> 3265
 tcatgacagt gtggtcctct gaagatttgt tcagactccc tggaactgtt ctttgtggtc
 60
 ctttttcgtg gttttcaaaa tgtttcatt gagggcgtat tacttttata atcaacaaaa
 120
 gagaaagtat aacttcattt tagaaattct cacctaaggc atttgaaaaa taatccaaaa
 180
 ggtacattat tggtgatttt tcttccttct agaaaggatc ttgttcgagt agaagccaca
 240
 gtcattgaaa agacagaatc atggccaaga atcattatga gattcaggaa aaggaaaaac
 300
 ttcaagaaga aaagaagtaa gttagagaaa gtaccgctgg gccctgttgc acggtgctgg
 360
 ttgcccaggc gcatgcggaac ggaggggtgtg gggcacgtgg gtctcgggac aggaagccca
 420
 ggcaggtctc aacctggctg ccaactgcca cttgccaccc tcctcctaga gggagcaccc
 480
 agaggggtcca gcctcgctcc ccttctcctc cacgctccac gcgt
 524

<210> 3266
 <211> 82
 <212> PRT
 <213> Homo sapiens

<400> 3266
 Met Arg Phe Arg Lys Arg Lys Asn Phe Lys Lys Lys Arg Ser Lys Leu
 1 5 10 15
 Glu Lys Val Pro Leu Gly Pro Val Ala Arg Cys Trp Leu Pro Arg Arg
 20 25 30
 Met Arg Thr Glu Gly Val Gly His Val Gly Leu Gly Thr Gly Ser Pro
 35 40 45
 Gly Arg Ser Gln Pro Gly Cys His Cys Pro Leu Ala Thr Leu Ile Leu
 50 55 60
 Glu Gly Ala Pro Arg Gly Ser Ser Leu Ala Pro Leu Leu Leu His Ala
 65 70 75 80
 Pro Arg

<210> 3267
 <211> 393
 <212> DNA
 <213> Homo sapiens

<400> 3267

gtcgaatatg catgcagagt acaggggttta gaacatgaca tggaagagat caatgctcga
60
tggaatacat tgaataaaaaa ggtcgcacaa agaattgcac agctacagga agctttgttg
120
cattgtggga agtttcaaga tgcttggag ccattgctca gctgggtggc agataccgag
180
gagctcatag ccaatcagaa acctccatct gctgagtata aagtggtgaa agcacagatc
240
caagaacaga agttgctcca gcggctccta gatgatcgaa aggccacagt agacatgctt
300
caagcagaag gaggcagaat agcccagtca gcagagctgg ctgatagaga gaaaatcact
360
ggacagctgg agagtcttga aagtagatgg act
393

<210> 3268

<211> 131

<212> PRT

<213> Homo sapiens

<400> 3268

Val	Glu	Tyr	Ala	Cys	Arg	Val	Gln	Gly	Leu	Glu	His	Asp	Met	Glu	Glu
1				5				10					15		
Ile	Asn	Ala	Arg	Trp	Asn	Thr	Leu	Asn	Lys	Lys	Val	Ala	Gln	Arg	Ile
		20					25					30			
Ala	Gln	Leu	Gln	Glu	Ala	Leu	Leu	His	Cys	Gly	Lys	Phe	Gln	Asp	Ala
	35					40					45				
Leu	Glu	Pro	Leu	Leu	Ser	Trp	Leu	Ala	Asp	Thr	Glu	Glu	Leu	Ile	Ala
	50				55				60						
Asn	Gln	Lys	Pro	Pro	Ser	Ala	Glu	Tyr	Lys	Val	Val	Lys	Ala	Gln	Ile
65					70				75					80	
Gln	Glu	Gln	Lys	Leu	Leu	Gln	Arg	Leu	Leu	Asp	Asp	Arg	Lys	Ala	Thr
			85					90					95		
Val	Asp	Met	Leu	Gln	Ala	Glu	Gly	Gly	Arg	Ile	Ala	Gln	Ser	Ala	Glu
		100					105					110			
Leu	Ala	Asp	Arg	Glu	Lys	Ile	Thr	Gly	Gln	Leu	Glu	Ser	Leu	Glu	Ser
		115					120					125			
Arg	Trp	Thr													
		130													

<210> 3269

<211> 1423

<212> DNA

<213> Homo sapiens

<400> 3269

ctgtatcaaa aataatagta acctttttgaa tatacacaat ttatctagaa tctattttcc
60
tttgaagctg taactttatg agcgattatt tactaccttt gagaaatgtg ttttagtata
120
aaatatagga tgtggaagcg aaaaaatatc tgggtagcaa gtgaggtgta ctcaaaaata
180

agcaaaagtc acgtgggtct gattttatac cctcgctgga aagcttggtc tcagacacac
 240
 tgttactgca agtgtgtgtg agggggaaac tctcacacac tttgcagttg aggacagggc
 300
 tagactttga ggtggaccct ggctcccagg gctgtgtact ccagagccgt gtttctcttt
 360
 tgctcagact gaacaagtgg aacgaaatta cattaagaa aagaaggcag cagtgaagaa
 420
 atttgaagac aagaaggttg agctgaaaga gaacctgatt gctgagctag aagaaaagaa
 480
 gaaaatgatt gaaaacgaaa tgctgacaat ggaactgaat ggagattcta tggagggtgaa
 540
 acctatcatg accagaaagt tgcggaggcg accaaatgat cccgtcccca tcccagacaa
 600
 gaggaggaaa cctgctccag ccagctaaa ctatttgta acagatgaac agatcatgga
 660
 ggatctgaga acattaaata agcttaagtc acccaagaga ccagcatctc catcctctcc
 720
 tgagcacttg cctgcaacac ccgcggaatc tccagcacag agatttgagg cgcggataga
 780
 agatggcaaa ctgtattatg acaaaagatg gtaccacaag agccaggcca tctatctgga
 840
 gtcaaaggac aaccagaaac tgagctgctg gatcagttct gtaggagcca atgagatctg
 900
 ggtgaggaag acaagtgaca gcaccaagat gaggatctac ctgggtcagc ttcagcgagg
 960
 gctcttcgtg atccgccggc gctcagctgc ttgactttct acagtgtctt tctcttgacc
 1020
 ctttttctgg agtgggtttt atttttgttt tgtttcgttt tctccttaat agaaaaatgt
 1080
 taacttactg ggaatagcta ctcagccttg gaaatggaga gcactgcagt gaattcttta
 1140
 gggcactttt gtggccggat gcttccaact ttgtcagttt tttctgcctc aacttcttcc
 1200
 agacatcagt caccatgaga ctgttttact ttcaggcgta ttggggggtt tgatttactt
 1260
 tcctttttatt tctttatttt ttgcttatac ttgtttttga aaacctctc tgagtttgaa
 1320
 gggacagcta tttttattga ttatctttta gtctctctac catggagaag agcaggaagg
 1380
 gataactct ccagtgcatt ttcagtgttt gaatcggatt agt
 1423

<210> 3270

<211> 169

<212> PRT

<213> Homo sapiens

<400> 3270

Met	Ile	Glu	Asn	Glu	Met	Leu	Thr	Met	Glu	Leu	Asn	Gly	Asp	Ser	Met
1				5				10						15	
Glu	Val	Lys	Pro	Ile	Met	Thr	Arg	Lys	Leu	Arg	Arg	Arg	Pro	Asn	Asp
			20					25					30		
Pro	Val	Pro	Ile	Pro	Asp	Lys	Arg	Arg	Lys	Pro	Ala	Pro	Ala	Gln	Leu

```

      35          40          45
Asn Tyr Leu Leu Thr Asp Glu Gln Ile Met Glu Asp Leu Arg Thr Leu
 50          55          60
Asn Lys Leu Lys Ser Pro Lys Arg Pro Ala Ser Pro Ser Ser Pro Glu
65          70          75          80
His Leu Pro Ala Thr Pro Ala Glu Ser Pro Ala Gln Arg Phe Glu Ala
      85          90          95
Arg Ile Glu Asp Gly Lys Leu Tyr Tyr Asp Lys Arg Trp Tyr His Lys
      100          105          110
Ser Gln Ala Ile Tyr Leu Glu Ser Lys Asp Asn Gln Lys Leu Ser Cys
      115          120          125
Val Ile Ser Ser Val Gly Ala Asn Glu Ile Trp Val Arg Lys Thr Ser
      130          135          140
Asp Ser Thr Lys Met Arg Ile Tyr Leu Gly Gln Leu Gln Arg Gly Leu
145          150          155          160
Phe Val Ile Arg Arg Arg Ser Ala Ala
      165

```

<210> 3271
 <211> 464
 <212> DNA
 <213> Homo sapiens

```

<400> 3271
tcatgagcag ggcccaattc tggcttctct gtggtcgcca tccatgtgct gggcgtcact
60
gaaggcactg gggatacagc cgagcacaag atggacagag atccctggcc cctcggagca
120
ggcagtctgt ggctctggcc cctccagttc cttgtcacca ggagataggc aatgcagctg
180
atgagaaggg ccccggcagc aagagatcca atgatggtgg ccgccaggat cccagcgttg
240
gtgggcaggt gtgtactggg cagctcctta ttcttttcag ctacctggac ctcagtcttg
300
gccttcatag tccattcaga gttgatggta atggctactt ggtaggtgcc actgtctgta
360
ggctgggcgc ggcgcagcag catggaacca ttggggaagc ccacgatgtc tcgctgtccc
420
atggcactgc catccctctg aggcggttgt atccccaggg atgt
464

```

<210> 3272
 <211> 140
 <212> PRT
 <213> Homo sapiens

```

<400> 3272
Met Gly Gln Arg Asp Ile Val Gly Phe Pro Asn Gly Ser Met Leu Leu
 1          5          10          15
Arg Arg Ala Gln Pro Thr Asp Ser Gly Thr Tyr Gln Val Ala Ile Thr
      20          25          30
Ile Asn Ser Glu Trp Thr Met Lys Ala Lys Thr Glu Val Gln Val Ala
      35          40          45
Glu Lys Asn Lys Glu Leu Pro Ser Thr His Leu Pro Thr Asn Ala Gly

```


50		55		60	
Ile	Leu	Ala	Ala	Thr	Ile
65		70		75	
Ile	Ser	Cys	Ile	Ala	Tyr
		85		90	
Ser	His	Arg	Leu	Pro	Ala
		100		105	
Cys	Ser	Ala	Val	Ser	Pro
		115		120	
Ala	Thr	Thr	Glu	Lys	Pro
		130		135	
				140	

<210> 3273

<211> 387

<212> DNA

<213> Homo sapiens

<400> 3273

```

ngcgcgccag ggatggaaaa ctttattctg tatgaggaga tcggaagagg aagcaagact
60
gttggtctata aagggcgacg gaaggaaca atcaattttg tagccattct ttgtactgat
120
aagtgcagaa ggcctgaaat aaccaactgg gtccgtctca cccgtgaaat aaaacacaag
180
aatattgtaa cttttcatga atggtatgaa acaagcaacc acctctggct agtgggtggaa
240
ctccgcacag gtggttcctt aaaaacagtt attgctcaag atgaaaacct cccagaagat
300
gttggtgagag aatttggaaat tgacctgatt agtggattac atcatcttca taaacttggc
360
attctctttg tgacatttct cctagga
387

```

<210> 3274

<211> 129

<212> PRT

<213> Homo sapiens

<400> 3274

Xaa	Ala	Pro	Gly	Met	Glu	Asn	Phe	Ile	Leu	Tyr	Glu	Glu	Ile	Gly	Arg
1				5					10					15	
Gly	Ser	Lys	Thr	Val	Val	Tyr	Lys	Gly	Arg	Arg	Lys	Gly	Thr	Ile	Asn
			20					25					30		
Phe	Val	Ala	Ile	Leu	Cys	Thr	Asp	Lys	Cys	Arg	Arg	Pro	Glu	Ile	Thr
		35					40					45			
Asn	Trp	Val	Arg	Leu	Thr	Arg	Glu	Ile	Lys	His	Lys	Asn	Ile	Val	Thr
		50				55					60				
Phe	His	Glu	Trp	Tyr	Glu	Thr	Ser	Asn	His	Leu	Trp	Leu	Val	Val	Glu
65				70					75					80	
Leu	Arg	Thr	Gly	Gly	Ser	Leu	Lys	Thr	Val	Ile	Ala	Gln	Asp	Glu	Asn
			85					90						95	
Leu	Pro	Glu	Asp	Val	Val	Arg	Glu	Phe	Gly	Ile	Asp	Leu	Ile	Ser	Gly
			100				105					110			
Leu	His	His	Leu	His	Lys	Leu	Gly	Ile	Leu	Phe	Val	Thr	Phe	Leu	Leu

115 120 125
Gly

<210> 3275
<211> 1266
<212> DNA
<213> Homo sapiens

<400> 3275
ttttttttaa tcagttaaga ttcttggtga cacaaattgt ttacatcaa ctgttggtat
60
agaacacatg aaaggaatac atggggaaga aataaagtag aaccaagag ttcttttaag
120
ttttctttta tagagacatg aataacagat acactgaagt ataaacaaaa attggcctga
180
agcgtccggt ggccggctta gttaggagct atggctaaac atcatcctga ttgatcttt
240
tgccgcaagc aggctggtgt tgccatcgga agactgtgtg aaaaatgtga tggcaagtgt
300
gtgatttgtg actcctatgt gcgtccctgc actctggtgc gcatatgtga tgagtgtaac
360
tatggatctt accaggggag ctgtgtgatc tgtggaggac ctggggtctc tgatgcctat
420
tattgtaagg agtgcaccat ccaggagaag gacagagatg gctgcccaaa gattgtcaat
480
ctggggagct ctaagacaga cctcttctat gaacgcaaaa aatacggctt caagaagagg
540
tgattggtgg gtggccctt cctcccccca acatcagtct gctgcagctg ccagaaaaca
600
tgctactac taccagcaga aaggagcag agccagagc atcaccagga gtgcctgcta
660
gtgtactggc agcttgccac cccctcctct cccttcaccc agacacgtgg tagggatgga
720
aaaggattct tcacagagca ctctggcaca ccatatcgga gaaaaattga tagattagtt
780
aatggttttt cttgaattcg agaagcatag atctgttctc catattggta tgttctccct
840
caaccaagat cttctaaaaa gaaataatat tttagtcttc tgcttgagga actgactgtg
900
aagcgacgcc cagtgaataa catgatcttg cagcagctct ggtggcagct gtccttgagg
960
aacctttggt gtgtggtggg aagctatcag aacaagaaat gtaggcattt cccgtttttt
1020
ttgggggggg ggtggggggg cagggtctctg ccctcttgaa aggcatttac ttgtttaaca
1080
cttgtccagc tacagtgggg tacagttagct ggctattcac aggcattcac atagccact
1140
agtctcatat tattttcctt ttgagaaatt ggaaactctt tctgttgcta ttatattaat
1200
aaagtgggtg tttattttct ggtaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
1260
aaaaaa
1266

<210> 3276
 <211> 110
 <212> PRT
 <213> Homo sapiens

<400> 3276
 Met Ala Lys His His Pro Asp Leu Ile Phe Cys Arg Lys Gln Ala Gly
 1 5 10 15
 Val Ala Ile Gly Arg Leu Cys Glu Lys Cys Asp Gly Lys Cys Val Ile
 20 25 30
 Cys Asp Ser Tyr Val Arg Pro Cys Thr Leu Val Arg Ile Cys Asp Glu
 35 40 45
 Cys Asn Tyr Gly Ser Tyr Gln Gly Arg Cys Val Ile Cys Gly Gly Pro
 50 55 60
 Gly Val Ser Asp Ala Tyr Tyr Cys Lys Glu Cys Thr Ile Gln Glu Lys
 65 70 75 80
 Asp Arg Asp Gly Cys Pro Lys Ile Val Asn Leu Gly Ser Ser Lys Thr
 85 90 95
 Asp Leu Phe Tyr Glu Arg Lys Lys Tyr Gly Phe Lys Lys Arg
 100 105 110

<210> 3277
 <211> 1435
 <212> DNA
 <213> Homo sapiens

<400> 3277
 ncctccgtct ccgagaacaa caacaacagc aacaagaaaa caacaataaa aaaaataagg
 60
 ctgcgtggga ggcagaaaga gctaattgcg ccacgcttgt ccctcggcca ccgtcccacc
 120
 cagacttccg tctccttaaa atgttcatgc gtaagtgcgt ggcagaagcg gctcaagcgc
 180
 actcgtgcgt cattgctgtc agggccgagg gagcggtgca aggccgccgc gtgacgtcag
 240
 gacgccgcgg tcaggacgtc gaagccaaag aagaccagag ccagccgggt ggcacagcgg
 300
 tgtcgtggcc gtgttctga tcgcctgggt ggttgttggc gtgtccctgc agcgaaggat
 360
 cctggttggc agtgaaaaag cagtctggct cccgaggtcc accccttata cccaaggtc
 420
 cagatggcgg ccaacgtggg tgatcaacgt agcacagatt ggtcttctca gtacagcatg
 480
 gtggctgggg caggccgaga gaatggcatg gagacgccga tgcacgagaa cccggagtgg
 540
 gagaaggccc gtcaggccct ggccagcatc agcaagtcag gagctgccgg cggtcttgcc
 600
 aagtccagca gcaatgggccc tgtggccagt gcaagtacgt gtcccaggca gaagcctcag
 660
 ctttgagca gcagcagtac taccagtggg accagcagta caactatgcc taccctaca
 720
 gctactacta tcccatgagc atgtaccaga gctatggctc cccttcccag tatgggatgg
 780

ccggctccta tggctagcca caccacagca gccatccgca ccccaacacc aagggactct
 840
 gaaccagccc ccagtccccg gcatggatga gagcatgtcc taccaggctc cccctcagca
 900
 gctgccgtcg gctcagcccc ctcagccctc aaatccccca catggggctc acacgctgaa
 960
 cagtggccct cagcctggga cagctccagc cacacagcan ncagccaggc ggggcccgcc
 1020
 acgggccagg cctatgggcc acacacctac accgaacctg ccaagcccaa gaagggccaa
 1080
 cagctgtgga accgcatgaa acccgcccct gggactggag gttcaagttc aacatccaga
 1140
 agcgaccctt tgctgttacc acccagagct ttggctccaa cgcagagggc cagcacagtg
 1200
 gttttggccc ccagcccaac cctgagaaag ttcagaacca cagcgggtcc tctgcccggg
 1260
 ggaacctgtc tgggaagccc gatgactggc cccaggacat gaaagagtat gtggagcgct
 1320
 gcttcaccgc ctgtgagtcg gaggaggaca aggaccgcac ggaaaagctg ctcaaggagg
 1380
 tgctgcaggc gcggctgcag gacggctcgg cctataccat tgactggagc cgggga
 1435

<210> 3278

<211> 104

<212> PRT

<213> Homo sapiens

<400> 3278

Met	Ala	Ala	Asn	Val	Gly	Asp	Gln	Arg	Ser	Thr	Asp	Trp	Ser	Ser	Gln
1				5				10					15		
Tyr	Ser	Met	Val	Ala	Gly	Ala	Gly	Arg	Glu	Asn	Gly	Met	Glu	Thr	Pro
			20					25					30		
Met	His	Glu	Asn	Pro	Glu	Trp	Glu	Lys	Ala	Arg	Gln	Ala	Leu	Ala	Ser
		35					40					45			
Ile	Ser	Lys	Ser	Gly	Ala	Ala	Gly	Gly	Ser	Ala	Lys	Ser	Ser	Ser	Asn
	50					55					60				
Gly	Pro	Val	Ala	Ser	Ala	Ser	Thr	Cys	Pro	Arg	Gln	Lys	Pro	Gln	Leu
65					70				75					80	
Cys	Ser	Ser	Ser	Ser	Thr	Thr	Ser	Gly	Thr	Ser	Ser	Thr	Thr	Met	Pro
				85					90					95	
Thr	Pro	Thr	Ala	Thr	Thr	Ile	Pro								
				100											

<210> 3279

<211> 1130

<212> DNA

<213> Homo sapiens

<400> 3279

nngcgcgccc accgcgccgc atccatgttc gacaccacac cccactctgg ccggagcacg
 60
 ccaagcagct ccccatcgct ccggaaacgg ctgcagctcc tgcccccaag ccggccccca
 120

cctgagccag aaccaggcac catggtggag aagggatcag atagctcctc agagaagggt
 180
 ggggtgcctg ggacccccag caccagagc ctaggcagcc ggaacttcat ccgcaacagc
 240
 aagaagatgc agagctggta cagtatgctg agccccactt ataagcagcg taatgaggac
 300
 ttccggaaac tggtcagcaa actccccgaa gcagaacgcc tcattgtgga ttactcctgc
 360
 gccctgcagc gtgagatcct gctccagggc cgcctctacc tctctgagaa ctggatctgc
 420
 ttctacagca acatcttccg ctgggagacc acgatctcca tccagctgaa ggaagtgaca
 480
 tgtctgaaga aggaaaagac ggccaagctg atccccaacg ccatccagat ctgcacggag
 540
 agcgagaagc atttcttcac ttcctttggg gcccgtagacc gctgcttctt cctcatcttc
 600
 cgcctctggc agaatgcact gcttgaaaag acgctgagtc cccgcgagct ctggcacctg
 660
 gtgcatcagt gctacggctc agagctgggc ctcaccagtg aggatgagga ctatgtctcc
 720
 cccttgcagc tgaacggtct ggggaccccc aaggaagtgg gagatgtgat cgccttgagc
 780
 gacatcacct cctcgggggc agctgaccgc agccaggagc caagcccagt gggttcgcgc
 840
 cgtggccatg tcacgcccac cctttcccga gccagcagcg acgcagacca tggggcagag
 900
 gaggacaagg aggagcaggt agacagccag ccagacgcct cctccagcca gacagtgacc
 960
 ccggtggctg aacccccgag cacagagccc acccagcctg acggggccac caccctgggc
 1020
 cccttggatc tgctgccag tgaggagcta ttgacagaca caagtaactc ctcttcattc
 1080
 actggggagg aagcggactt ggctgccttg cttcccgacc tctccggccg
 1130

<210> 3280

<211> 376

<212> PRT

<213> Homo sapiens

<400> 3280

Xaa	Arg	Ala	His	Arg	Ala	Ala	Ser	Met	Phe	Asp	Thr	Thr	Pro	His	Ser
1				5					10					15	
Gly	Arg	Ser	Thr	Pro	Ser	Ser	Ser	Pro	Ser	Leu	Arg	Lys	Arg	Leu	Gln
			20					25					30		
Leu	Leu	Pro	Pro	Ser	Arg	Pro	Pro	Pro	Glu	Pro	Glu	Pro	Gly	Thr	Met
		35				40						45			
Val	Glu	Lys	Gly	Ser	Asp	Ser	Ser	Ser	Glu	Lys	Gly	Gly	Val	Pro	Gly
	50					55					60				
Thr	Pro	Ser	Thr	Gln	Ser	Leu	Gly	Ser	Arg	Asn	Phe	Ile	Arg	Asn	Ser
65					70				75					80	
Lys	Lys	Met	Gln	Ser	Trp	Tyr	Ser	Met	Leu	Ser	Pro	Thr	Tyr	Lys	Gln
			85					90						95	
Arg	Asn	Glu	Asp	Phe	Arg	Lys	Leu	Phe	Ser	Lys	Leu	Pro	Glu	Ala	Glu

100	105	110
Arg Leu Ile Val Asp Tyr Ser Cys	Ala Leu Gln Arg Glu Ile Leu Leu	
115	120	125
Gln Gly Arg Leu Tyr Leu Ser Glu	Asn Trp Ile Cys Phe Tyr Ser Asn	
130	135	140
Ile Phe Arg Trp Glu Thr Thr Ile Ser	Ile Gln Leu Lys Glu Val Thr	
145	150	155
Cys Leu Lys Lys Glu Lys Thr Ala Lys	Leu Ile Pro Asn Ala Ile Gln	
165	170	175
Ile Cys Thr Glu Ser Glu Lys His Phe	Phe Thr Ser Phe Gly Ala Arg	
180	185	190
Asp Arg Cys Phe Leu Leu Ile Phe Arg	Leu Trp Gln Asn Ala Leu Leu	
195	200	205
Glu Lys Thr Leu Ser Pro Arg Glu Leu	Trp His Leu Val His Gln Cys	
210	215	220
Tyr Gly Ser Glu Leu Gly Leu Thr Ser	Glu Asp Glu Asp Tyr Val Ser	
225	230	235
Pro Leu Gln Leu Asn Gly Leu Gly Thr	Pro Lys Glu Val Gly Asp Val	
245	250	255
Ile Ala Leu Ser Asp Ile Thr Ser Ser	Gly Ala Ala Asp Arg Ser Gln	
260	265	270
Glu Pro Ser Pro Val Gly Ser Arg Arg	Gly His Val Thr Pro Asn Leu	
275	280	285
Ser Arg Ala Ser Ser Asp Ala Asp His	Gly Ala Glu Glu Asp Lys Glu	
290	295	300
Glu Gln Val Asp Ser Gln Pro Asp Ala	Ser Ser Ser Gln Thr Val Thr	
305	310	315
Pro Val Ala Glu Pro Pro Ser Thr Glu	Pro Thr Gln Pro Asp Gly Pro	
325	330	335
Thr Thr Leu Gly Pro Leu Asp Leu Leu	Pro Ser Glu Glu Leu Leu Thr	
340	345	350
Asp Thr Ser Asn Ser Ser Ser Ser Thr	Gly Glu Glu Ala Asp Leu Ala	
355	360	365
Ala Leu Leu Pro Asp Leu Ser Gly		
370	375	

<210> 3281

<211> 842

<212> DNA

<213> Homo sapiens

<400> 3281

gaattctgcc ttgccgtgtg cctcattggc caaaggaaag caacagagtc tgcagccagg
60
gcaggaccgc caggaggggc ctggaccgcg ggggctcctg gcagcgctgt gcctttctga
120
ggcaaggagg tagagccagc ggctgaggac ctgtcagggc cagtcccagc tctgcagctt
180
gctgtgtgac ctggcacaca tcctctccct gcctccctca gtctcttccc ctgcaagacg
240
gggtcctgac acggatctca tgggattgct ctgaggccca ggcagtccca ggctcaacca
300
ctggttcaca aagtgtgttg tttccaggaa gaacagatgg gggcgctga gggcaaaggg
360

cctgagtgtg ggtcgaggat atgccggctg ctcgctcagg ggctggggtt tcattctgtg
420
tgtcttgaca ggggtgtgaca cttggcacca cactgttccc tgtcccttca tggatgtggc
480
ccacatgatg ttcctttcct cttgcaaaag aagttgctgg aaggccact gtccagcagc
540
ccccagggtg cctggggccac ggtgcctttg tgggcccagc tacaaggagg acttgcaggc
600
tcgtgtcttg gacagatact ggcgccaggg ccaagtgaag cccgggattg gtgggcatct
660
ctagctggtc cctgagagag ggtggagggt gctgacaggc cttggcgctt tcattctgtc
720
actccagagg cccttgtgct tgcagcaggg aggtcaaggc caggcgctct gaccccgcc
780
gctcctccac actgagcctc ctgcacgtgc tcacaggtag agaagcggcg ggtcaatctg
840
tc
842

<210> 3282

<211> 146

<212> PRT

<213> Homo sapiens

<400> 3282

Met	Pro	Thr	Asn	Pro	Gly	Leu	His	Leu	Ala	Leu	Ala	Pro	Val	Ser	Val
1				5				10					15		
Pro	Asp	Thr	Ser	Leu	Gln	Val	Leu	Leu	Val	Ala	Gly	Pro	Thr	Lys	Ala
			20					25					30		
Pro	Trp	Pro	Arg	Gln	Pro	Gly	Gly	Cys	Trp	Thr	Val	Gly	Leu	Pro	Ala
		35				40					45				
Thr	Ser	Phe	Ala	Arg	Gly	Lys	Glu	His	His	Val	Gly	His	Ile	His	Glu
	50				55					60					
Gly	Thr	Gly	Asn	Ser	Val	Val	Pro	Ser	Val	Thr	Pro	Cys	Gln	Asp	Thr
65				70					75					80	
Gln	Asp	Glu	Asn	Pro	Ala	Pro	Glu	Arg	Ala	Ala	Gly	Ile	Ser	Ser	Thr
			85					90					95		
His	Thr	Gln	Ala	Leu	Cys	Pro	Gln	Ala	Pro	Pro	Ser	Val	Leu	Pro	Gly
		100					105					110			
Asn	Asn	Thr	Leu	Cys	Glu	Pro	Val	Glu	Pro	Gly	Thr	Ala	Trp	Ala	
		115				120					125				
Ser	Glu	Gln	Ser	His	Glu	Ile	Arg	Val	Arg	Thr	Pro	Ser	Cys	Arg	Gly
	130				135						140				
Arg	Asp														
145															

<210> 3283

<211> 3268

<212> DNA

<213> Homo sapiens

<400> 3283

nggatcagag cggctgtggt gctccagaaa cattaccgca tgcagagggc ccgccaggcc
60

taccagaggg tccgcagagc tgccgttggt atccaggcct tcacccggng ccatgtttgt
120
gcggagaacc taccgccagt cctcatggag cacaaggcca ccaccatcca gaagcacgtg
180
cggggctgga tggcacgcag gcacttccag cggctgcggg atgcagccat tgtcatccag
240
tgtgccttcc ggatgctcaa ggccaggcgg gagctgaagg ccctcaggat tgaggcccg
300
tcagcagagc atctgaaacg tctcaacgtg ggcatggaga acaaggtggt ccagctgcag
360
cggaagatcg atgagcagaa caaagagttc aagacacttt cagagcagtt gtccgtgacc
420
acctcaacat acaccatgga ggtagagcgg ctgaagaagg agctggtgca ctaccagcag
480
agcccagggtg aggacaccag cctcaggctg caggaggagg tggagagcct gcgcacagag
540
ctgcagaggg ccactcggga gcgcaagatc ttggaggacg cccacagcag ggagaaagat
600
gagctgagga agcgagttgc agacctggag caagaaaatg ctctcttgaa agatgagaaa
660
gaacagctca acaaccaa at cctgtgccag tctaaagatg aatttgccca gaactctgtg
720
aaggaaaatc tcctcatgaa gaaagaactg gaggaggagc gatcccggtg ccagaacctt
780
gtgaaggaat attcacagtt ggagcagaga tacgacaacc ttcgggatga aatgaccatc
840
ataaagcaaa ctccagggtca taggcggaac ccatcaaacc aaagtagctt agaactctgac
900
tccaattacc cctccatctc cacatctgag atcggagaca ctgaggatgc cctccagcag
960
gtggaggaaa ttggcctgga gaaggcagcc atggacatga cggctcttct gaagctgcag
1020
aagagagtac gggagctgga gcaggagagg aaaaagctgc aagtgcagct ggagaagaga
1080
gaacagcagg acagcaagaa agtccaggcg gaaccaccac agactgacat agatttggac
1140
ccgaatgcag atctggccta caatagtctg aagaggcaag agctggagtc agagaacaaa
1200
aagctgaaga atgacctgaa tgagctgagg aaagccgtgg ccgaccaagc cacgcagaat
1260
aactccagcc acggctcccc agatagctac agcctcctgc tgaaccagct caagctggcc
1320
cacgaggagc tcgagggtcg caaggaggag gtgctcatcc tcaggaccca gatcgtgagc
1380
gccgaccagc ggcgactcgc cggcaggaac gcggagccga acattaatgc cagatcaagt
1440
tggcctaaca gtgaaaggca tgttgaccag gaggatgcca ttgaggccta tcacgggggtc
1500
tgccagacaa acaggctgct ggaggctcag ctgcaggccc agagcctgga gcatgaggag
1560
gaggtggagc atctcaaggc tcagctcgag gccctgaagg aggagatgga caaacagcag
1620
cagaccttct gccagacgt actgctctcc ccagaggccc aggtggaatt cggcgttcag
1680

caggaaatat cccggctgac caacgagaat ctggacctta aagaactggt agaaaagctg
1740
gaaaagaatg agaggaagct caaaaagcaa ctgaagattt acatgaagaa agcccaggac
1800
ctagaagctg cccaggcatt ggcccagagt gagaggaagc gccatgagct caacaggcag
1860
gtcacgggtcc agcggaaaga gaaggatttc cagggcatgc tggagtacca caaagaggac
1920
gaggeccctcc tcatccggaa cctggtgaca gacttgaagc cccagatgct gtcgggcaca
1980
gtgcccctgct tccccgccta catcctctac atgtgcatcc ggcacgcgga ctacaccaac
2040
gacgatctca aggtgcactc cctgctgacc tccaccatca acggcattaa gaaagtcctg
2100
aaaaagcaca atgatgactt tgagatgacg tcattctggt tatccaacac ctgccgcctt
2160
cttcaactgct tgaagcagta cagcggggat gagggcttca tgactcagaa cactgcaaag
2220
cagaatgaac actgtcttaa gaattttgac ctcaccgaat accgtcaggt gctgagtga
2280
ctttccattc agatctacca gcagctcatt aaaattgccg agggcgtggt acagccgatg
2340
atagtttctg ccatgttggg aaatgagagc attcagggtc tatctggtgt gaagcccacc
2400
ggctaccgga agcgtcctc cagcatggca gatggggata actcatactg cctggaagct
2460
atcatccgcc agatgaatgc ctttcataca gtcattgtgt accagggtt ggaccctgag
2520
atcatcctgc aggtattcaa acagctcttc tacatgatca acgcagtga ccttaacaac
2580
ctgctcttgc ggaaggacgt ctgctcttgg agcacaggca tgcaactcag gtacaatata
2640
agtcagcttg aggagtggct tcggggaaga aaccttcacc agagtggagc agttcagacc
2700
atggaacctc tgatccaagc agcccagctc ctgcaattaa agaagaaaac ccaggaggac
2760
gcagaggcta tctgctccct gtgtacctcc ctcagcacc cagcagattgt caaaatttta
2820
aacctttata ctcccctgaa tgaatttgaa gaacgggtaa cagtggcctt tatacgaaca
2880
atccaggcac aactacaaga gcggaatgac cctcagcaac tgctattaga tgccaagcac
2940
atgtttcctg ttttgtttcc atttaatcca tcttctctaa ccatggactc aatccacatc
3000
ccagcgtgtc tcaatctgga attcctcaat gaagtctgaa gatgcatgtt tccagcatta
3060
gtttgattcc caatgtgagc aagaaggaag tatatacagt aaagtaaatt caaggatctg
3120
ttaaactctg taaaagtaga tcaaatacaga gattgacagc ctgtggaggg tgctgaacta
3180
tacagaatta gacacaacta tgtcattatt tttgtacct actgctcaga ataaaaacac
3240
ttgaaatatg aaaaaaaaaa aaaaaaaaaa
3268

<210> 3284
 <211> 1012
 <212> PRT
 <213> Homo sapiens

<400> 3284

```

Xaa Ile Arg Ala Ala Val Val Leu Gln Lys His Tyr Arg Met Gln Arg
 1           5           10           15
Ala Arg Gln Ala Tyr Gln Arg Val Arg Arg Ala Ala Val Val Ile Gln
          20           25           30
Ala Phe Thr Arg Xaa His Val Cys Ala Glu Asn Leu Pro Pro Val Leu
          35           40           45
Met Glu His Lys Ala Thr Thr Ile Gln Lys His Val Arg Gly Trp Met
          50           55           60
Ala Arg Arg His Phe Gln Arg Leu Arg Asp Ala Ala Ile Val Ile Gln
65          70           75           80
Cys Ala Phe Arg Met Leu Lys Ala Arg Arg Glu Leu Lys Ala Leu Arg
          85           90           95
Ile Glu Ala Arg Ser Ala Glu His Leu Lys Arg Leu Asn Val Gly Met
          100          105          110
Glu Asn Lys Val Val Gln Leu Gln Arg Lys Ile Asp Glu Gln Asn Lys
          115          120          125
Glu Phe Lys Thr Leu Ser Glu Gln Leu Ser Val Thr Thr Ser Thr Tyr
          130          135          140
Thr Met Glu Val Glu Arg Leu Lys Lys Glu Leu Val His Tyr Gln Gln
145          150          155          160
Ser Pro Gly Glu Asp Thr Ser Leu Arg Leu Gln Glu Glu Val Glu Ser
          165          170          175
Leu Arg Thr Glu Leu Gln Arg Ala His Ser Glu Arg Lys Ile Leu Glu
          180          185          190
Asp Ala His Ser Arg Glu Lys Asp Glu Leu Arg Lys Arg Val Ala Asp
          195          200          205
Leu Glu Gln Glu Asn Ala Leu Leu Lys Asp Glu Lys Glu Gln Leu Asn
          210          215          220
Asn Gln Ile Leu Cys Gln Ser Lys Asp Glu Phe Ala Gln Asn Ser Val
225          230          235          240
Lys Glu Asn Leu Leu Met Lys Lys Glu Leu Glu Glu Glu Arg Ser Arg
          245          250          255
Tyr Gln Asn Leu Val Lys Glu Tyr Ser Gln Leu Glu Gln Arg Tyr Asp
          260          265          270
Asn Leu Arg Asp Glu Met Thr Ile Ile Lys Gln Thr Pro Gly His Arg
          275          280          285
Arg Asn Pro Ser Asn Gln Ser Ser Leu Glu Ser Asp Ser Asn Tyr Pro
          290          295          300
Ser Ile Ser Thr Ser Glu Ile Gly Asp Thr Glu Asp Ala Leu Gln Gln
305          310          315          320
Val Glu Glu Ile Gly Leu Glu Lys Ala Ala Met Asp Met Thr Val Phe
          325          330          335
Leu Lys Leu Gln Lys Arg Val Arg Glu Leu Glu Gln Glu Arg Lys Lys
          340          345          350
Leu Gln Val Gln Leu Glu Lys Arg Glu Gln Gln Asp Ser Lys Lys Val
          355          360          365
Gln Ala Glu Pro Pro Gln Thr Asp Ile Asp Leu Asp Pro Asn Ala Asp

```

370	375	380
Leu Ala Tyr Asn Ser	Leu Lys Arg Gln Glu	Leu Glu Ser Glu Asn Lys
385	390	395
Lys Leu Lys Asn Asp	Leu Asn Glu Leu Arg	Lys Ala Val Ala Asp Gln
405	410	415
Ala Thr Gln Asn Asn Ser Ser His Gly Ser Pro Asp Ser Tyr Ser Leu		
420	425	430
Leu Leu Asn Gln Leu Lys Leu Ala His Glu Glu Leu Glu Val Arg Lys		
435	440	445
Glu Glu Val Leu Ile Leu Arg Thr Gln Ile Val Ser Ala Asp Gln Arg		
450	455	460
Arg Leu Ala Gly Arg Asn Ala Glu Pro Asn Ile Asn Ala Arg Ser Ser		
465	470	475
Trp Pro Asn Ser Glu Arg His Val Asp Gln Glu Asp Ala Ile Glu Ala		
485	490	495
Tyr His Gly Val Cys Gln Thr Asn Arg Leu Leu Glu Ala Gln Leu Gln		
500	505	510
Ala Gln Ser Leu Glu His Glu Glu Val Glu His Leu Lys Ala Gln		
515	520	525
Leu Glu Ala Leu Lys Glu Glu Met Asp Lys Gln Gln Thr Phe Cys		
530	535	540
Gln Thr Leu Leu Leu Ser Pro Glu Ala Gln Val Glu Phe Gly Val Gln		
545	550	555
Gln Glu Ile Ser Arg Leu Thr Asn Glu Asn Leu Asp Leu Lys Glu Leu		
565	570	575
Val Glu Lys Leu Glu Lys Asn Glu Arg Lys Leu Lys Lys Gln Leu Lys		
580	585	590
Ile Tyr Met Lys Lys Ala Gln Asp Leu Glu Ala Ala Gln Ala Leu Ala		
595	600	605
Gln Ser Glu Arg Lys Arg His Glu Leu Asn Arg Gln Val Thr Val Gln		
610	615	620
Arg Lys Glu Lys Asp Phe Gln Gly Met Leu Glu Tyr His Lys Glu Asp		
625	630	635
Glu Ala Leu Leu Ile Arg Asn Leu Val Thr Asp Leu Lys Pro Gln Met		
645	650	655
Leu Ser Gly Thr Val Pro Cys Leu Pro Ala Tyr Ile Leu Tyr Met Cys		
660	665	670
Ile Arg His Ala Asp Tyr Thr Asn Asp Asp Leu Lys Val His Ser Leu		
675	680	685
Leu Thr Ser Thr Ile Asn Gly Ile Lys Lys Val Leu Lys Lys His Asn		
690	695	700
Asp Asp Phe Glu Met Thr Ser Phe Trp Leu Ser Asn Thr Cys Arg Leu		
705	710	715
Leu His Cys Leu Lys Gln Tyr Ser Gly Asp Glu Gly Phe Met Thr Gln		
725	730	735
Asn Thr Ala Lys Gln Asn Glu His Cys Leu Lys Asn Phe Asp Leu Thr		
740	745	750
Glu Tyr Arg Gln Val Leu Ser Asp Leu Ser Ile Gln Ile Tyr Gln Gln		
755	760	765
Leu Ile Lys Ile Ala Glu Gly Val Leu Gln Pro Met Ile Val Ser Ala		
770	775	780
Met Leu Glu Asn Glu Ser Ile Gln Gly Leu Ser Gly Val Lys Pro Thr		
785	790	795
Gly Tyr Arg Lys Arg Ser Ser Ser Met Ala Asp Gly Asp Asn Ser Tyr		

805 810 815
 Cys Leu Glu Ala Ile Ile Arg Gln Met Asn Ala Phe His Thr Val Met
 820 825 830
 Cys Asp Gln Gly Leu Asp Pro Glu Ile Ile Leu Gln Val Phe Lys Gln
 835 840 845
 Leu Phe Tyr Met Ile Asn Ala Val Thr Leu Asn Asn Leu Leu Leu Arg
 850 855 860
 Lys Asp Val Cys Ser Trp Ser Thr Gly Met Gln Leu Arg Tyr Asn Ile
 865 870 875 880
 Ser Gln Leu Glu Glu Trp Leu Arg Gly Arg Asn Leu His Gln Ser Gly
 885 890 895
 Ala Val Gln Thr Met Glu Pro Leu Ile Gln Ala Ala Gln Leu Leu Gln
 900 905 910
 Leu Lys Lys Lys Thr Gln Glu Asp Ala Glu Ala Ile Cys Ser Leu Cys
 915 920 925
 Thr Ser Leu Ser Thr Gln Gln Ile Val Lys Ile Leu Asn Leu Tyr Thr
 930 935 940
 Pro Leu Asn Glu Phe Glu Glu Arg Val Thr Val Ala Phe Ile Arg Thr
 945 950 955 960
 Ile Gln Ala Gln Leu Gln Glu Arg Asn Asp Pro Gln Gln Leu Leu Leu
 965 970 975
 Asp Ala Lys His Met Phe Pro Val Leu Phe Pro Phe Asn Pro Ser Ser
 980 985 990
 Leu Thr Met Asp Ser Ile His Ile Pro Ala Cys Leu Asn Leu Glu Phe
 995 1000 1005
 Leu Asn Glu Val
 1010

<210> 3285

<211> 1518

<212> DNA

<213> Homo sapiens

<400> 3285

ctggcactaa actgtagct aatcatccgg tgttccatgt gaatgacaga acacggaata
 60
 aacctgatga caccaccact ttatttttgag ctaaatcctc atttaagtga gaacaggaca
 120
 ggtttcacca ctgcctcctt tggcaacttg agtggtggtg tcccaccga gtttatggct
 180
 gcaaagatag gtcttttctc gtatttatgt ataaacaggt accagttttg attttattta
 240
 atcatttcat acattaacat acatgacaca tcaaatgag aaatgcacag ttaaccgtt
 300
 caacagctgg ccttacttca aaagaacact atattcatat taaacattta cagtctttcc
 360
 atctaacttt acacatgtcc taaatcattt tccagcactt ctcacataga agtctagttt
 420
 tgctctttta aatcaccatc tgtatcacc ctagtagacg cgagggtttc cccaattaca
 480
 tgctgaagag agccagccac caccacacct aaagacatcc aagcagctcc agagcctgcc
 540
 tccgaggcca ccccttcgcc acggcagctc cgattccaag aactgattat ctgacactag
 600

tgaaccagca ctaaaggctg taggatgtga ctacatcaca gttccagaag gaagggggacc
 660
 atggccaaga gaagccctaa atgacagaag ctcattaataa ccaagtcccc caaacctcct
 720
 gaaacatcgt tagcaaggag ctactgcttt cctttcttaa acatgttttg ggcattgacca
 780
 cactctggaa gtggtgaact gttacacatt tgggtgtgtgt gtacataaca tcaaaaacta
 840
 ctgtgtgaaa cttgagaatg tctgattaaa gatttcaatg tatatctaaa aactaactca
 900
 aatcgttgac cagcactttc ccagtatcat aacaatgcgg ctgacctctt tctgccttca
 960
 ctttacaccc catcatagca cattatttct gcacaactag tgaggtctgt gcggctcatc
 1020
 atccccataa ccaagtcggt ctgtgttgag tcatatcatt ctgtgctggt tttagaagtc
 1080
 accataggaa acatgaagtc acatcctggt caaaaaactg tccatttctc aaaaacagag
 1140
 aaaaacctga gatacgaggc agcaactagc gacacttaca ggaagggaaa gaacaatgac
 1200
 aacaccgccc cagccccacc cccaaaaagc tgctgttggt aattaaggct tcaaaagagg
 1260
 acccacactg tagctgataa aactcaagcc aggaggatgt ttgaaagcca atctgcacta
 1320
 tcacttgctc cagtgacctc ctatgttcag ctgccaggac cgattccata cagtgtattgt
 1380
 aggttgagga ctgaggacgc ccttttgctc tcgctccatt ttgatttgc ttttccactg
 1440
 aagacacgcc ggccagcggt tccaaaaaca gcttgcccat ggctttgcac tctattcaca
 1500
 actgatcaaa actcaatt
 1518

<210> 3286

<211> 142

<212> PRT

<213> Homo sapiens

<400> 3286

Met	Lys	Ser	His	Pro	Gly	Gln	Lys	Thr	Val	His	Phe	Ser	Lys	Thr	Glu
1				5					10					15	
Lys	Asn	Leu	Arg	Tyr	Glu	Ala	Ala	Thr	Ser	Asp	Thr	Tyr	Arg	Lys	Gly
			20					25					30		
Lys	Asn	Asn	Asp	Asn	Thr	Arg	Pro	Ala	Pro	Pro	Pro	Lys	Ser	Cys	Cys
		35				40						45			
Cys	Glu	Leu	Arg	Leu	Gln	Lys	Arg	Thr	His	Thr	Val	Ala	Asp	Lys	Thr
	50				55						60				
Gln	Ala	Arg	Arg	Met	Phe	Glu	Ser	Gln	Ser	Ala	Leu	Ser	Leu	Val	Pro
65				70					75					80	
Val	Thr	Ser	Tyr	Val	Gln	Leu	Pro	Gly	Pro	Ile	Pro	Tyr	Ser	Asp	Cys
			85				90						95		
Arg	Leu	Arg	Thr	Glu	Asp	Ala	Pro	Leu	Leu	Ser	Leu	His	Phe	Asp	Leu
			100				105						110		
Leu	Phe	Pro	Leu	Lys	Thr	Arg	Arg	Pro	Ala	Phe	Pro	Lys	Thr	Ala	Trp

115 120 125
 Pro Trp Leu Cys Thr Leu Phe Thr Thr Asp Gln Asn Ser Ile
 130 135 140

<210> 3287
 <211> 921
 <212> DNA
 <213> Homo sapiens

<400> 3287
 gtcgactcct tgcagaagca gtgagacgtg gcgggggtggg ggaggggtccc cgggggttggg
 60
 gagcgcgcggt cttggcggag tagggggcac ggccagcgca gtcagagctg gcgccctcct
 120
 gcgtaagccc aatccgggaa actcgttgcc cctctcctgg gaaaggaacg tccctcccca
 180
 ggggttgcgag tgactcgggc accatcaccc tgtgctgtaa agacctgcga gtgctgcagc
 240
 tggaaataga gggcgcgga ggcacgctgg gcatcgcccg ctccatcgag gtgtgccgag
 300
 ggagctcccc agccctttaa gctctccctg tctcgcgtag aggggaataa aaaggtgctt
 360
 ctgttcaaag aggtcccgca gccgcagcta aatggcaggg ggatgcaggg tgggtccgggg
 420
 tacttgagga ggccgaagct gaagctacag gactgagggg ctggaaaggg cgcgggcgag
 480
 acaattccga cctcccccag agcccctgac ttccttctcc ggacgctgtc ctccctggaa
 540
 tcagtcatca cctccttccc tttattctac cgtcccaagg gcctgagatt gggcgactcc
 600
 tggcacttcc tcccgccga actctactgc aagagagtag ctgcggaagt gggcgcggtc
 660
 gtaggggccc gggaagggtg aagcgccggg cctggaagag gcgcggggac agggcactcc
 720
 ctgggtgccc tagacctggc ctctctctc cctgcgctgc agaccaacgc ggccggaaaa
 780
 aggtctggag gggcttggca gccaaagctaa ttcgggagaa tttctatgat tatgattttt
 840
 ttattaaata gttataaaaa aatagggtat acaatttaaa ggactcttag tttaaaacaa
 900
 aatctattct gagaactctt c
 921

<210> 3288
 <211> 148
 <212> PRT
 <213> Homo sapiens

<400> 3288
 Met Thr Asp Ser Arg Glu Asp Ser Val Arg Arg Arg Lys Ser Gly Ala
 1 5 10 15
 Leu Gly Arg Val Gly Ile Val Ser Pro Ala Pro Phe Pro Ala Pro Gln
 20 25 30
 Ser Cys Ser Phe Ser Phe Gly Leu Ser Lys Tyr Pro Gly Pro Pro Cys

<400> 3290															
Met	Ile	Pro	Gly	Cys	Leu	Pro	Trp	Ser	Phe	Ala	Phe	Pro	Ser	Ser	Ser
1				5					10					15	
Pro	Cys	Lys	Ala	Arg	Leu	Leu	Leu	Pro	Lys	Gly	Trp	Gly	Asp	Val	Leu
			20					25					30		
Gly	Ser	Leu	Thr	Gln	Cys	Arg	Arg	Ala	Trp	Val	Pro	Pro	Trp	Thr	Gln

```

<400> 3291
nnngentatgg ggtgcgcttt acgcgactgc cgctggagcg cgggtgtgggt ggctgcactt
60
ggctggaggg ccccgcgctt gccttcgcct gcgccgtgga gcgcgacgcc cggggccggc
120
tggggccctt ctcccgccac gcctgcggtg aggcctccccg ccccgctctcc taccatagct
180
gcctctgtcc ctccgcaactg gctgttcacc tggctagctg tgtccgtttc tcaaccggga
240
agcagagtctn ggcgtcgacc gctgccgcca cccagttac ccctccccc cccgcccgtc
300
cttccctagc ctacatagcc ctgggccatg gcccggcctg gtcccacctc tgatgtcccg
360
ccccccacag gtggacagac gccttcgnnt gggcctgagc acttgcggcc ggacatgtc
420
cgctcaccgc gtgtccgggg ccctggcgcg ggtcctggaa gtaccctagc gggccacacc
480
ctgacagccg agctgatggc gcaccccggc taccacagtg tgctccacc ggcggctgcg
540
gtgaaggccc cgacgctttc tcttgctctt gggagcggct gcatgagctg cgcgtcctca
600
ccgcgcccac gctgcggggc cagcttgccc aggatggcgt gcagctttgc gccctcgacg
660
acctggactc caagaggcca ggggaggagg tccctgtga gccactctg gaacccttc
720
gggaaccctc ccnntactct gacccctac agacaaccaa gcactaatcc ccttagtacc
780
agaaaagggg agccaggatt tagtcctggc ccagcccaga gctgggacct ggagcacgat
840
tggttgactt ccctgggtag gacactgcca cctctgggct caggctctca tgctccaaa
900
ggcatctag agtttgagca gccttcttg ctgcaggcag gcctagcctg tggcagcggg
960
tagggggccg cagagcattt ggtgcccctc catgttgcaa tgcaaacacc ttcaccactg
1020

```


gggcagtgagg gagagatggc tatattaata aaataacgtg tgtctttcaa aaaaa
1075

<210> 3292

<211> 102

<212> PRT

<213> Homo sapiens

<400> 3292

Xaa	Xaa	Met	Gly	Cys	Ala	Leu	Arg	Asp	Cys	Arg	Trp	Ser	Ala	Val	Trp
1				5					10					15	
Val	Ala	Ala	Leu	Gly	Trp	Arg	Pro	Pro	Arg	Val	Pro	Ser	Pro	Ala	Pro
			20					25					30		
Trp	Ser	Ala	Thr	Pro	Gly	Pro	Pro	Trp	Ala	Pro	Ser	Pro	Ala	Thr	Pro
		35				40					45				
Ala	Val	Arg	Leu	Pro	Ala	Pro	Ser	Pro	Thr	Ile	Ala	Ala	Ser	Val	Pro
	50					55					60				
Pro	His	Trp	Leu	Phe	Thr	Trp	Leu	Ala	Val	Ser	Val	Ser	Gln	Pro	Gly
65				70					75					80	
Ser	Glu	Ser	Xaa	Arg	Arg	Pro	Leu	Pro	Pro	Pro	Gln	Leu	Pro	Pro	Pro
			85					90					95		
Thr	Pro	Pro	Ser	Leu	Pro										
					100										

<210> 3293

<211> 2362

<212> DNA

<213> Homo sapiens

<400> 3293

nnctcaccga agccggcgct ccccgccgga gatgaggaaa ctgagggtca gagagggtcac
60
atggcttgct cgaggcccc cagccagtgt gaaccacat ccctgcccc agggccacct
120
gcaggacgcc gacacctacc cctcagcaga cgccggagag aaatgagtag caacaaagag
180
cagcggtcag cagtgttcgt gatcctcttt gccctcatca ccctcctcat cctctacagc
240
tccaacagtg ccaatgaggt ctccattac ggctccctgc ggggccgtag ccgccgacct
300
gtcaacctca agaagtggag catcactgac ggctatgtcc ccattctcgg caacaagaca
360
ctgccctctc ggtgccacca gtgtgtgatt gtcagcagct ccagccacct gctgggcacc
420
aagctgggcc ctgagatcga gcgggctgag tgtacaatcc gcatgaatga tgcaccacc
480
actggctact cagctgatgt gggcaacaag accacctacc gcgtcgtggc ccattccagt
540
gtgttccgcg tgctgaggag gccccaggag tttgtcaacc ggacccctga aaccgtgttc
600
atcttctggg ggcccccgag caagatgcag aagccccagg gcagcctcgt gcgtgtgatc
660
cagcgagcgg gcctggtgtt ccccaacatg gaagcatatg ccgtctctcc cggccgcatg
720

cggcaatttg acgacctctt ccgggggtgag acggggcaagg acaggagagaa gtctcattcg
780
tggttgagca caggctgggt taccatgggtg atcgcggtgg agttgtgtga ccacgtgcat
840
gtctatggca tgggtcccccc caactactgc agccagcggc cccgcctcca gcgcatgccc
900
taccactact acgagcccaa gggggccggac gaatgtgtca cctacatcca gaatgagcac
960
agtcgcaagg gcaaccacca ccgcttcac accgagaaaa gggctcttctc atcgtggggc
1020
cagctgtatg gcatcacctt ctcccacccc tcttggaact aggccaccca gcctgtggga
1080
cctcaggagg gtcagaggag aagcagcctc cggccagccg ctaggccagg gaccatcttt
1140
ggccaatcaa ggcttgctgg agtgtctccc agccaatcag ggccttgagg aggatgtatc
1200
ctccagccaa tcagggcctg gggaatctgt tggcgaatca gggatttggg agtctatgtg
1260
gttaatcagg ggtgtctttc ttgtgcagtc agggctctgcg cacagtcaat cagggtagag
1320
ggggtatctt tgagtcaatc tgaggctaag gacatgtcct tcccatgag gccttggttc
1380
agagccccag gaatggaccc cccaatcact cccactctg ctgggataat ggggtcctgt
1440
cccaaggagc tgggaacttg gtgttgcccc ctcaatttcc agcaccagaa agagagattg
1500
tgtgggggta gaagctgtct ggaggcccg ccagagaatt tgtggggttg tggaggttgt
1560
ggggggcggtg gggaggtccc agaggtggga ggctggcatc caggctcttg ctctgccctg
1620
agaccttga caaaccttc cccctctctg ggcaccttc tgcccacacc agtttccagt
1680
gcggagtctg agaccttcc cactccctt acaagtgcc tcgggtctgt cctccccgtc
1740
tggacctcc cagccactat cccttgctgg aaggctcagc tctttggggg gtctggggtg
1800
acctccccac ctctggaaa actttagggt atttttgcgc aaactccttc agggttggg
1860
gactctgaag gaaacgggac aaaaccttaa gctgttttct tagccctca gccagctgcc
1920
attagcttgg ctcttaaagg gccaggcctc cttttctgcc ctctagcagg gaggttttcc
1980
aactgttga ggcgccttg gggctgcccc ttgtctgga gtcactgggg gcttccgagg
2040
gtctccctcg accctctgtc gtccctgggt ggctgtcggg agctgtatca cctgggttct
2100
gtccctggc tctgtatcag gcactttatt aaagctgggc ctcatgggg tgtgtttgtc
2160
tctgtctct ctggagcctg gaaggaaagg gcttcaggag gaggtgtga ggctggaggg
2220
accagatgga ggaggccagc agctagccat tgcacactgg ggtgatgggt gggggcggtg
2280
actgccccag acttggtttt gtaatgattt gtacaggaat aaacacacct acgctccgaa
2340

aaaaaaaaaa aaaaaaaaaa aa
2362

<210> 3294

<211> 353

<212> PRT

<213> Homo sapiens

<400> 3294

Xaa	Ser	Pro	Lys	Pro	Ala	Leu	Pro	Ala	Gly	Asp	Glu	Glu	Thr	Glu	Ala	1	5	10	15
Gln	Arg	Gly	His	Met	Ala	Cys	Ser	Arg	Pro	Pro	Ser	Gln	Cys	Glu	Pro	20	25	30	
Thr	Ser	Leu	Pro	Pro	Gly	Pro	Pro	Ala	Gly	Arg	Arg	His	Leu	Pro	Leu	35	40	45	
Ser	Arg	Arg	Arg	Arg	Glu	Met	Ser	Ser	Asn	Lys	Glu	Gln	Arg	Ser	Ala	50	55	60	
Val	Phe	Val	Ile	Leu	Phe	Ala	Leu	Ile	Thr	Ile	Leu	Ile	Leu	Tyr	Ser	65	70	75	80
Ser	Asn	Ser	Ala	Asn	Glu	Val	Phe	His	Tyr	Gly	Ser	Leu	Arg	Gly	Arg	85	90	95	
Ser	Arg	Arg	Pro	Val	Asn	Leu	Lys	Lys	Trp	Ser	Ile	Thr	Asp	Gly	Tyr	100	105	110	
Val	Pro	Ile	Leu	Gly	Asn	Lys	Thr	Leu	Pro	Ser	Arg	Cys	His	Gln	Cys	115	120	125	
Val	Ile	Val	Ser	Ser	Ser	Ser	His	Leu	Leu	Gly	Thr	Lys	Leu	Gly	Pro	130	135	140	
Glu	Ile	Glu	Arg	Ala	Glu	Cys	Thr	Ile	Arg	Met	Asn	Asp	Ala	Pro	Thr	145	150	155	160
Thr	Gly	Tyr	Ser	Ala	Asp	Val	Gly	Asn	Lys	Thr	Thr	Tyr	Arg	Val	Val	165	170	175	
Ala	His	Ser	Ser	Val	Phe	Arg	Val	Leu	Arg	Arg	Pro	Gln	Glu	Phe	Val	180	185	190	
Asn	Arg	Thr	Pro	Glu	Thr	Val	Phe	Ile	Phe	Trp	Gly	Pro	Pro	Ser	Lys	195	200	205	
Met	Gln	Lys	Pro	Gln	Gly	Ser	Leu	Val	Arg	Val	Ile	Gln	Arg	Ala	Gly	210	215	220	
Leu	Val	Phe	Pro	Asn	Met	Glu	Ala	Tyr	Ala	Val	Ser	Pro	Gly	Arg	Met	225	230	235	240
Arg	Gln	Phe	Asp	Asp	Leu	Phe	Arg	Gly	Glu	Thr	Gly	Lys	Asp	Arg	Glu	245	250	255	
Lys	Ser	His	Ser	Trp	Leu	Ser	Thr	Gly	Trp	Phe	Thr	Met	Val	Ile	Ala	260	265	270	
Val	Glu	Leu	Cys	Asp	His	Val	His	Val	Tyr	Gly	Met	Val	Pro	Pro	Asn	275	280	285	
Tyr	Cys	Ser	Gln	Arg	Pro	Arg	Leu	Gln	Arg	Met	Pro	Tyr	His	Tyr	Tyr	290	295	300	
Glu	Pro	Lys	Gly	Pro	Asp	Glu	Cys	Val	Thr	Tyr	Ile	Gln	Asn	Glu	His	305	310	315	320
Ser	Arg	Lys	Gly	Asn	His	His	Arg	Phe	Ile	Thr	Glu	Lys	Arg	Val	Phe	325	330	335	
Ser	Ser	Trp	Ala	Gln	Leu	Tyr	Gly	Ile	Thr	Phe	Ser	His	Pro	Ser	Trp	340	345	350	
Thr																			

<210> 3295
 <211> 690
 <212> DNA
 <213> Homo sapiens

<400> 3295
 cacaggaag agagatttga tcatctagtc ccggttttgc ctggatgtga gatgggctca
 60
 gggcagggag ggggtgatgc tgtcatcctt ctcggttgga gcaggaagat gaaggacgat
 120
 gtcagactca ttttcagcct cattagggcag cagacggaga tggagggagg agagcaggag
 180
 gctgggggat gggctctgca ctgcagagac cagcagggac taaagaagag aggacatggg
 240
 gaactggaaa aataagcctt ccaggattgt ggggagaaaag acgctgtggg agaggccagg
 300
 atgctgcatt aggcacagga taacctggga acccaggcac atgggtcctg ctctccgaag
 360
 tctgcaagtc aagaagggaa cagagcacgc cgaccctctc cctttcccct ctgtctctct
 420
 tagtggcttt acagtgggta ccctgtcaga aaccagcact gggggccctg ccacccccac
 480
 atggaaggag tgtcctatct gtaaggagcg ctttcctgct gagagtgaca aggatgccct
 540
 ggaggaccac atggatggac acttcttttt cagcaccag ggacccttc acctttgagt
 600
 gatcttactc cctcgtacat gcacaaatac acactcatgc acacacacac tcacacacat
 660
 gcatacactt aggtttcatg cccattttct
 690

<210> 3296
 <211> 120
 <212> PRT
 <213> Homo sapiens

<400> 3296
 Met Gly Asn Trp Lys Asn Lys Pro Ser Arg Ile Val Gly Arg Lys Thr
 1 5 10 15
 Leu Trp Glu Arg Pro Gly Cys Cys Ile Arg His Arg Ile Thr Trp Glu
 20 25 30
 Pro Arg His Met Gly Pro Ala Leu Arg Ser Leu Gln Val Lys Lys Gly
 35 40 45
 Thr Glu His Ala Asp Pro Leu Pro Phe Pro Ser Val Ser Leu Ser Gly
 50 55 60
 Phe Thr Val Gly Thr Leu Ser Glu Thr Ser Thr Gly Gly Pro Ala Thr
 65 70 75 80
 Pro Thr Trp Lys Glu Cys Pro Ile Cys Lys Glu Arg Phe Pro Ala Glu
 85 90 95
 Ser Asp Lys Asp Ala Leu Glu Asp His Met Asp Gly His Phe Phe Phe
 100 105 110
 Ser Thr Gln Gly Pro Leu His Leu

115

120

<210> 3297

<211> 3176

<212> DNA

<213> Homo sapiens

<400> 3297

ncgctttttt nttttttttt tttttttttg agacggagtc ttgcaactgtt gccaggtg
60
gagacagtgg tgtgatcttg gctcaactgca gtctccacct ctcaaattca agtgattctc
120
ctgcctcagc ctcccaagta gctgggatta taggtgcccg ccaccctgcc tggetaattt
180
ttgtattttt agtaaagatg gggtttttga acattggcca ggctgggtctc aaactcctga
240
cctcaactga actgccccca tcgggcttcc aaagtgttgg gattagaggt ctgagctact
300
gggcccgggc aaacttgga acattttttt ccttcctagt gcctcagttt tctcaaattg
360
aaaatgggaa taaaatatct accttgtaag acttttgtga gggctctaata actgttatat
420
acattatctc atttaattct cacaacaacc tttaaaatag ggatacgatc attctcaatt
480
tacagttgag tgaaagtgag gcagttcaga tggcttgact aaggttacct ggcatttgag
540
tggcagagcc aagatttaaa ccagctctg tctgatgcta gaccctttgc ttcaaccata
600
ttctgtaatg tctcatttct aggaatgaat gaaggaatgt tcacacatgt atcatccagc
660
ctctgaggtg cctctgacaa ccataattgc ctctcatga aaccgagccc agttcctcct
720
gtggctcttc ctgctgcagc cgtgggcctt gctctcctgg ctggaagcgc tgttttcac
780
ttatctgggg attctcattg ctgacgggtg tggaggtgtt ggggcacagt ggtttcaagc
840
acaggctttg gagtcaggca aacctgggtt tcaatatggc tcaggaagct gttgggcagg
900
aggacttttg gtgagcaggc actgtctgat aatggtgttt ccaggatcc caggtttctt
960
gggggcacac aagtaggcca aagatgatct gggaacctcc cagagaattg cctcatactg
1020
tactctcccc aagaggctgc agccaagaga ataggggcca cgtcacgggg gctcatgatg
1080
gagtctgggc tttgtgggaa aggaagtggg gaggggtctca gaaatgtttt tacaatgtaa
1140
aatcttccag ttagaacttt atatgcagga tttaatcaga aggaaatttg gacaggactc
1200
atttttctca ttgctgctct aagtggctgc tctaagcagt ctggactgtc tcccctgtgg
1260
ctttgttgag ttcagtaaac atttattgtg cacatactgt gtgcaggcac tttgctgggg
1320
atacagggat gaaataggga cagtgcccat gcctgagggc attgccctga agctggatgc
1380

taaggccatc tgtgtgtgtg tctgtgtgtc tgcattgtatc tctgtgtctg cgtgtgtctc
1440
tgtgtctgtg ctctgtgtct atgtgtatgt ctgtgtgagt gtctgtgggt ctctttttgt
1500
gtttgtgtgt gtatctgtgt gtgtgttct ctgtgtgcct gatatgtctt tgatgtgtgt
1560
ttctgtatgt gtctctgtgt gtgtctatat gtgtgtatct gtgtctatgt atgtgtgtgt
1620
cattttgttt gtttctgggt gtgtctatct gcgtgtctct gtatacctgt atctccgtgt
1680
gtgtgtctgt gtgtgtgtat ttgttngtgt ctctgtatgt gcgtccgtgg gtgtgtgtct
1740
gtgtgtgtgt gtgtgtgtat tgagagggag ggagaaagaa agggagcgac agatgggtca
1800
gcatggaagg tgtatcctca ttcacagccc tgggaggaat cagtcaatcc acctactggt
1860
caagaccaac tctgggtggtg cctggctgac agtgggaatg tgacttttca tttaagaatg
1920
ggtttgcatt tcctaggaaa agaattgtagg agttggagtc tcaaggagtgt tttttttttt
1980
ccttttgta ttgagagagc acagccttgt gtgcattggc tgacagttac caatctgcgt
2040
gttggggata gccacagaga agagacagag ggaaccgcag acagtgcgca ggagtctggt
2100
ggaaccagtc tgccttttagg cccaaacccc caactatgaa tacctcacct tagggagctc
2160
agtcttttgt ttgttcataa aaaaccaatc tgggaaccag aggtggacag gaaagaggag
2220
gctgacctgc tgctcccagg ttaatgtgat cttggctggt gttgacaagt gtattatggt
2280
tcatagcata gcacaaaccc ttagagattc cccttgccct caccggggtc accacaccaa
2340
accaggtatc ttcaggagtgt aggaccacaa aaaattggag atctcaccag ggtgggcaga
2400
gatttctttg ttaaagtctg aaggagagaa gactcagggg catctctctg gctccaaatc
2460
tctgaagggc caaaggcaga agtgctgggg gagtgtcaag ttttcattta caacagggac
2520
agcctgacag tggctgcctt atgtggcagt gagtttcagt caacagtcaa cagaggccca
2580
acgactactc accaatggga ccaggtggcc atagagggct ggggagtgca gagcaaggac
2640
aaccaccca ccaccagta tgccagcctc atgcacagct tcatcctgaa ggcacggagc
2700
accgtgcgtg acatcgaccc ccagaacgat ctcaccttcc ttcgaattcg ctccaagaaa
2760
aatgaaatta tggttgcacc agataaagac tatttcctga ttgtgattca gaatccaacc
2820
gaataagcca ctctcttggc tccctgtgtc attccttaat ttaatgcccc ccaagaatgt
2880
taatgtcaat catgtcagtg gactagcaca tggcagtcgc ttggaacca ctcacaccaa
2940
tccagtgacc gtgtgtgggc tggcggctct tctccccac caacggaacc cctgtgtgca
3000

ccaaccttcc ccagagctcc ggagcgccct ctctcactt ccaggttttg gagcaagagc
 3060
 ttgcaggaag cccgcaccca gcttccttct gaccttcagt tcactttgtc gcccttggag
 3120
 aaagctgttt ttctttaact aaaaataacc aaaatgctaa aaaaaaaaaa aaaaaa
 3176

<210> 3298

<211> 251

<212> PRT

<213> Homo sapiens

<400> 3298

Gly	His	Leu	Cys	Val	Cys	Leu	Cys	Val	Cys	Met	Tyr	Leu	Cys	Val	Cys
1				5					10					15	
Val	Cys	Leu	Cys	Val	Cys	Ala	Leu	Cys	Leu	Cys	Val	Cys	Leu	Cys	Glu
			20					25					30		
Cys	Leu	Trp	Val	Ser	Phe	Cys	Val	Cys	Val	Cys	Ile	Cys	Val	Cys	Val
		35					40					45			
Xaa	Leu	Cys	Ala	Cys	Met	Cys	Leu	Asp	Val	Cys	Phe	Cys	Met	Cys	Leu
	50					55					60				
Cys	Val	Cys	Leu	Tyr	Val	Cys	Ile	Cys	Val	Tyr	Val	Cys	Val	Cys	His
65					70					75					80
Phe	Val	Cys	Phe	Trp	Val	Cys	Leu	Ser	Ala	Cys	Leu	Cys	Ile	Pro	Val
				85					90					95	
Ser	Pro	Cys	Val	Cys	Leu	Cys	Val	Cys	Ile	Cys	Xaa	Cys	Leu	Cys	Met
			100					105					110		
Cys	Val	Arg	Gly	Cys	Val	Ser	Val	Cys	Val	Cys	Val	Cys	Ile	Glu	Arg
		115					120					125			
Glu	Gly	Glu	Arg	Lys	Gly	Ala	Thr	Asp	Gly	Ser	Ala	Trp	Lys	Val	Tyr
	130					135					140				
Pro	His	Ser	Gln	Pro	Trp	Glu	Glu	Ser	Val	Asn	Pro	Pro	Thr	Gly	Gln
145					150					155					160
Asp	Gln	Leu	Trp	Trp	Cys	Leu	Ala	Asp	Ser	Gly	Asn	Val	Thr	Phe	His
			165					170					175		
Leu	Arg	Met	Gly	Leu	His	Phe	Leu	Gly	Lys	Glu	Cys	Arg	Ser	Trp	Ser
		180						185					190		
Leu	Lys	Glu	Cys	Phe	Phe	Phe	Pro	Phe	Val	Ile	Glu	Arg	Ala	Gln	Pro
		195					200					205			
Cys	Val	His	Trp	Leu	Thr	Val	Thr	Asn	Leu	Arg	Val	Gly	Asp	Ser	His
	210					215					220				
Arg	Glu	Glu	Thr	Glu	Gly	Thr	Ala	Asp	Ser	Glu	Gln	Glu	Ser	Gly	Gly
225					230					235					240
Thr	Ser	Leu	Pro	Leu	Gly	Pro	Asn	Pro	Gln	Leu					
				245					250						

<210> 3299

<211> 1387

<212> DNA

<213> Homo sapiens

<400> 3299

nnaccggttaa ttctctctat tgggtgtgcag cagccacatt gaaggataga gtggcagcag
 60

aggccaagga tcgtgagttg atggagtttg ctgctgaaaa tgaaggggaag tctgggggag
120
gtctccacag cgtagcttaa ggggggtgcgg ctaagtccag agcctggcag ggagggagta
180
agggaacttag caggggagga ggagttcggc ggcggagagg aggggacagg gctgacaggg
240
ataaaggaga taggggatgg agaggaagga agtggacaaa ggccagagga aataccgatg
300
gacctaacgg tagtgaagca ggaaattata gactggccag gtacagaagg caggttggct
360
ggccagtggg tagaacagga ggtggaggat aggcctgagg tgaaggatga gaacgcaggc
420
gtattggagg tgaagcagga gacggatagt agtttagtgg taaaagaagc gaaggtgggt
480
gaaccagagg taaaggaaga gaaggtaaag gaagaggtaa tggactggtc agaagtgaag
540
gaagagaagg ataacttga gataaaacag gaggagaagt ttgttgggtca atgcataaaa
600
gaggaattga tgcattgaga gtgtgtaaaa gaagagaagg atttcctgaa gaaagaaatc
660
gtggatgata caaaggtgaa agaagagcct ccgataaatc acccggtggg ctgcaagcgg
720
aaactggcca tgtcaagggtg tgagacttgt ggtacagaag aagcaaagta cagatgtcca
780
cgttgatgac gatattcctg cagtttgccc tgtgtaaaga aacacaaagc agaactgaca
840
tgtaatggag ttcgagataa aactgcatac atttcaatac aacagtttac tgaaatgaat
900
ctcctaagtg attatcgatt tttggaagat gtggcaagaa cagcggacca tatttctaga
960
gatgcttttt tgaagagacc aataagcaat aaatatatgt actttatgaa aaatcgtgcc
1020
cggagcaaag gtattaactt aaaacttcta cccaatggat tcaccaagag gaaggagaat
1080
tcaacctttt ttgataagaa aaaacaacag ttttgttggc atgtgaagct ccagtttcct
1140
caaagtcaag ctgagtacat agaaaaaaga gtaccagatg ataaaactat taatgaaatc
1200
ctaaaacctt acattgatcc tgaaaagtct gatcctgtaa ttcgtcaaag gttgaaagcc
1260
tacattcgct ctgagactgg ggttcagatt ttaatgaaga ttgaatatat gcagcaaaat
1320
ttagtaagat attatgaact agatccttat aaaagtctcc tagacaattt gaggaacaaa
1380
gtgatca
1387

<210> 3300

<211> 219

<212> PRT

<213> Homo sapiens

<400> 3300

Met Ser Arg Cys Glu Thr Cys Gly Thr Glu Glu Ala Lys Tyr Arg Cys

1	5	10	15
Pro Arg Cys Met Arg Tyr Ser Cys Ser Leu Pro Cys Val Lys Lys His			
20	25	30	
Lys Ala Glu Leu Thr Cys Asn Gly Val Arg Asp Lys Thr Ala Tyr Ile			
35	40	45	
Ser Ile Gln Gln Phe Thr Glu Met Asn Leu Leu Ser Asp Tyr Arg Phe			
50	55	60	
Leu Glu Asp Val Ala Arg Thr Ala Asp His Ile Ser Arg Asp Ala Phe			
65	70	75	80
Leu Lys Arg Pro Ile Ser Asn Lys Tyr Met Tyr Phe Met Lys Asn Arg			
85	90	95	
Ala Arg Ser Lys Gly Ile Asn Leu Lys Leu Leu Pro Asn Gly Phe Thr			
100	105	110	
Lys Arg Lys Glu Asn Ser Thr Phe Phe Asp Lys Lys Lys Gln Gln Phe			
115	120	125	
Cys Trp His Val Lys Leu Gln Phe Pro Gln Ser Gln Ala Glu Tyr Ile			
130	135	140	
Glu Lys Arg Val Pro Asp Asp Lys Thr Ile Asn Glu Ile Leu Lys Pro			
145	150	155	160
Tyr Ile Asp Pro Glu Lys Ser Asp Pro Val Ile Arg Gln Arg Leu Lys			
165	170	175	
Ala Tyr Ile Arg Ser Gln Thr Gly Val Gln Ile Leu Met Lys Ile Glu			
180	185	190	
Tyr Met Gln Gln Asn Leu Val Arg Tyr Tyr Glu Leu Asp Pro Tyr Lys			
195	200	205	
Ser Leu Leu Asp Asn Leu Arg Asn Lys Val Ile			
210	215		

<210> 3301

<211> 2109

<212> DNA

<213> Homo sapiens

<400> 3301

ctgatggccc ggcattgggtt accgctgctg cccctgctgt cgctcctggg cggcgctgg
 60
 ctcaagctag gaaatggaca ggctactagc atgggtccaac tgcaggggtgg gagattcctg
 120
 atgggaacaa attctccaga cagcagagat ggtgaagggc ctgtgctggga ggcgacagt
 180
 aaaccctttg ccatcgacat atttcctgtc accaacaag atttcaggga ttttgtcagg
 240
 gagaaaaagt atcggacaga agctgagatg tttggatgga gctttgtctt tgaggacttt
 300
 gtctctgatg agctgagaaa caaagccacc cagccaatga aggtcaagtt taccatggg
 360
 ggaactgggt ccagccaaac cgcaccaacc tgtggcaggg aaagttcccc aaggagaca
 420
 aagctgagga tggtctccat ggagtctccc ncagtgaatg ctttccccgc ccagaacaac
 480
 tacgggctct atgacctcct ggggaacgtg tgggagtgga cagcatcacc gtaccaggct
 540
 gctgagcagg acatgcgcgt cctccggggg catcctggat cgacacagct gatggctctg
 600

ccaatcaccg ggcccgggtc accaccagga tgggcaacac tccagattca gcctcagaca
660
acctcgggtt ccgctgtgct gcagacgcag gccggccgcc aggggagctg taagcagccg
720
ggtgggtgaca aggagaaaag ccttctaggg tcaactgtcat tccctggcca tgttgcaaac
780
agcgcaattc caagctcgag agcttcagcc tcaggaaaga acttccccctt ccctgtctcc
840
catccctctg tggcaggcgc ctctcaccag ggcaggagag gactcagcct cctgtgtttt
900
ggagaagggg cccaatgtgt gttgacgatg gctgggggcc aggtgtttct gttagaggcc
960
aagtattatt gacacaggat tgcaaacaca caaacaattg gaacagagca ctctgaaagg
1020
ccatttttta agcattttta aatctattct ctcccccttt ctccctggat gattcaggaa
1080
gctgacattg tttcctcaag gcagaatttt cctgggttctg ttttctcagc cagttgtctg
1140
ggaaggagaa tgetttcttt gtggcctcat ctgtgggttc gtgtccctct gaaggaaact
1200
agtttccact gtgtaacagg cagacatgta actatttaaa gcacagttca gtcctaaaag
1260
ggtctgggag aaccagatga tgtactaggt gaagcattgc attgtgggaa tcacaaagca
1320
aatagtactc cagaaagaca aatatcagaa gcttcctatt cttttttttt tttttttttt
1380
tttttgagac aggggtctttc tctgttgccc aggctagagt gcaactggtga tcacggctca
1440
ctctagcctt gaattcctgg gcccaagcaa ttctcccacc tcagcctcct gagtagctgg
1500
gactacaagt gtgcaccacc atgcctgget aattttttga atttttgtag tgatgggac
1560
tcgctctgtt gcccaggggtg gtctcgaact cctggcctca agcgatcctc ccacctcgac
1620
ctcccaaagt gctgggatta caggtgtgag ccacctcgcc tgggccccct tctccatatg
1680
cctccaaaaa catgtccctg gagagtagcc tgetcccaca ctgtcactgg atgtcatggg
1740
gccaataaaa tctcctgcaa ttgtgtatct cagacatttg tgtctttgat cctcacctg
1800
tgaccctaag ggaagaaagc ctgagtgtca gtaactctgg gcctccccta aagagaaatg
1860
gagatgggtg ctcatctagg aagtagagga gcaggggggtt cctgggttctc agggcacgtg
1920
tgatctctgc ccacccaggg cctgccccag cctgcaggta ttgctgtgtg gtgggaacac
1980
ccacttccct tgtgcacagc ctttgagagg ggatcgtggc ctcaagttcca ggggttcctg
2040
ccagggccaa gtgtctcttc tgcagaggcc tgcacgcac tcaccccttt gacttgtatt
2100
tccatggct
2109

<210> 3302

<211> 323
 <212> PRT
 <213> Homo sapiens

<400> 3302

```

Leu Met Ala Arg His Gly Leu Pro Leu Leu Pro Leu Leu Ser Leu Leu
 1           5           10           15
Val Gly Ala Trp Leu Lys Leu Gly Asn Gly Gln Ala Thr Ser Met Val
      20           25           30
Gln Leu Gln Gly Gly Arg Phe Leu Met Gly Thr Asn Ser Pro Asp Ser
      35           40           45
Arg Asp Gly Glu Gly Pro Val Arg Glu Ala Thr Val Lys Pro Phe Ala
      50           55           60
Ile Asp Ile Phe Pro Val Thr Asn Lys Asp Phe Arg Asp Phe Val Arg
65           70           75           80
Glu Lys Lys Tyr Arg Thr Glu Ala Glu Met Phe Gly Trp Ser Phe Val
      85           90           95
Phe Glu Asp Phe Val Ser Asp Glu Leu Arg Asn Lys Ala Thr Gln Pro
      100          105          110
Met Lys Val Lys Phe Thr His Gly Gly Thr Gly Ser Ser Gln Thr Ala
      115          120          125
Pro Thr Cys Gly Arg Glu Ser Ser Pro Arg Glu Thr Lys Leu Arg Met
      130          135          140
Ala Ser Met Glu Ser Pro Xaa Val Asn Ala Phe Pro Ala Gln Asn Asn
145          150          155          160
Tyr Gly Leu Tyr Asp Leu Leu Gly Asn Val Trp Glu Trp Thr Ala Ser
      165          170          175
Pro Tyr Gln Ala Ala Glu Gln Asp Met Arg Val Leu Arg Gly His Pro
      180          185          190
Gly Ser Thr Gln Leu Met Ala Leu Pro Ile Thr Gly Pro Gly Ser Pro
      195          200          205
Pro Gly Trp Ala Thr Leu Gln Ile Gln Pro Gln Thr Thr Ser Val Ser
      210          215          220
Ala Val Leu Gln Thr Gln Ala Gly Arg Gln Gly Ser Cys Lys Gln Pro
225          230          235          240
Gly Gly Asp Lys Glu Lys Ser Leu Leu Gly Ser Leu Ser Phe Pro Gly
      245          250          255
His Val Ala Asn Ser Ala Ile Pro Ser Ser Arg Ala Ser Ala Ser Gly
      260          265          270
Lys Asn Phe Pro Phe Pro Val Ser His Pro Ser Val Ala Gly Ala Ser
      275          280          285
His Gln Gly Arg Arg Gly Leu Ser Leu Leu Cys Phe Gly Glu Gly Ala
290          295          300
Gln Cys Val Leu Thr Met Ala Gly Gly Gln Val Phe Leu Leu Glu Ala
305          310          315          320
Lys Tyr Tyr

```

<210> 3303
 <211> 699
 <212> DNA
 <213> Homo sapiens

<400> 3303

cctaggaagc gggacttcac caatgaagcc cccccagctc ctctcccaga cgctcggct
 60
 tccccctgt ctccacaccg aagagccaag tcaactggaca ggaggtccac ggagccctcc
 120
 gtgacgcccc acctgctgaa tttcaagaaa ggctggctga ctaagcagta tgaggacggc
 180
 cagtggaaga aacactgggtt tgtcctcgcc gatcaaagcc tgagatacta cagggattca
 240
 gtggctgagg aggcagccga cttggatgga gaaattgact tgtccgcatg ttacgatgtc
 300
 acagagtatc cagttcagag aaactatggc ttccagatac atacaaagga gggcgagttt
 360
 accctgtcgg ccattgacatc tgggattcgg cggaactgga tccagaccat catgaagcac
 420
 gtgcacccga ccactgcccc ggatgtgacc agctcgttgc cagaggaaaa aaacaagagc
 480
 agctgctctt ttgagacctg cccgaggtcc actgagaagc aagaggcaga gctgggggag
 540
 ccggaccctg agcagaagag gagccgcgca cgggagcgga ggcgagaggg ccgctccaag
 600
 acctttgact gggctgagtt ccgtcccatc cagcaggccc tggctcagga gcgggtgggc
 660
 ggcggtggggc ctgctgacac ccacgagccc ctgcgccct
 699

<210> 3304

<211> 233

<212> PRT

<213> Homo sapiens

<400> 3304

Pro Arg Lys Arg Asp Phe Thr Asn Glu Ala Pro Pro Ala Pro Leu Pro
 1 5 10 15
 Asp Ala Ser Ala Ser Pro Leu Ser Pro His Arg Arg Ala Lys Ser Leu
 20 25 30
 Asp Arg Arg Ser Thr Glu Pro Ser Val Thr Pro Asp Leu Leu Asn Phe
 35 40 45
 Lys Lys Gly Trp Leu Thr Lys Gln Tyr Glu Asp Gly Gln Trp Lys Lys
 50 55 60
 His Trp Phe Val Leu Ala Asp Gln Ser Leu Arg Tyr Tyr Arg Asp Ser
 65 70 75 80
 Val Ala Glu Glu Ala Ala Asp Leu Asp Gly Glu Ile Asp Leu Ser Ala
 85 90 95
 Cys Tyr Asp Val Thr Glu Tyr Pro Val Gln Arg Asn Tyr Gly Phe Gln
 100 105 110
 Ile His Thr Lys Glu Gly Glu Phe Thr Leu Ser Ala Met Thr Ser Gly
 115 120 125
 Ile Arg Arg Asn Trp Ile Gln Thr Ile Met Lys His Val His Pro Thr
 130 135 140
 Thr Ala Pro Asp Val Thr Ser Ser Leu Pro Glu Lys Asn Lys Ser
 145 150 155 160
 Ser Cys Ser Phe Glu Thr Cys Pro Arg Ser Thr Glu Lys Gln Glu Ala
 165 170 175
 Glu Leu Gly Glu Pro Asp Pro Glu Gln Lys Arg Ser Arg Ala Arg Glu

	180		185		190
Arg	Arg	Arg	Glu	Gly	Arg
			Ser	Lys	Thr
			Phe	Asp	Trp
			Ala	Glu	Phe
			Arg		
	195		200		205
Pro	Ile	Gln	Gln	Ala	Leu
				Ala	Gln
				Glu	Arg
				Val	Gly
				Gly	Val
				Gly	Pro
	210		215		220
Ala	Asp	Thr	His	Glu	Pro
				Leu	Arg
				Pro	
	225		230		

<210> 3305

<211> 2717

<212> DNA

<213> Homo sapiens

<400> 3305

```

nnggatcccc gctactttct ccagatgaca gagaccactg ttaagacagc agcttggttc
60
atggccaacg tgcaggctctc tggaggggga cctagcatct ccttggtgat gaagactccc
120
agggtcgcca agaatgaggc gctctggcac ccgacgctga acttgccact gagccccag
180
gggactgtgc gaactgcagt ggagttccag gtgatgacac agaccaatc cctgagcttc
240
ctgctggggg cctcagcctc cttggactgt ggcttctcca tggcaccggg cttggacctc
300
atcagtgtgg agtggcgact gcagcacaag ggcaggggtc agttggtgta cagctggacc
360
gcagggcagg ggcaggctgt gcggaagggc gctaccctgn gagcctgcac aactgggcat
420
ggcnncagg atgcctccct caccctgcc ggctcacta tacaggacga ggggacctac
480
atgtgccaga tcaccacctc tctgtaccga gctcagcaga tcatccagct caacatccaa
540
gcttccccta aagtacgact gagcttggca aacgaagctc tgctgcccac cctcatctgc
600
gacattgctg gctattaccc tctggatgtg gtggtgacgt ggacccgaga ggagctgggt
660
ggatccccag cccaagtctc tgggtgcctc ttctccagcc tcaggcaaag cgtggcaggc
720
acctacagca tctcctcctc tctcaccgca gaacctgggc tctgcagggtg ccacttacac
780
ctgccaggtc acacacatct ctctggagga gcccttggg gccagcacc aggttgtccc
840
accagagcgg agaacagcct tgggagtcac ctttgccagc agtctcttcc ttcttgact
900
gatgttcctg gggcttcaga gacggcaagc acctacagga cttgggctgc ttcaggctga
960
acgctgggag accacttctc gtgctgacac acagagctcc catctccatg aagaccgcac
1020
agcgcggtga agccagccca gctgacctaa agcgacatga gactactaga aagaaacgac
1080
acccttcccc aagccccac agctactcca acccaaaca caaccaagcc agtttaatgg
1140
taggaatttg tattttttgc ctttgttcag aatacatgac attggtaaat atgccacatg
1200

```

cctttggtgg aagtacaact gttgttatta ctctatacaa gtatgagatc agggtttagga
1260
aaaaaagaca aagaggtgat gacagacaca cagtggaaac cccacatcgt ctcatggcaa
1320
accgaagaac gggatgtggg aagctcagct tcatttgact gcaaagtccc agggttttgt
1380
tgcacatttg ctcatgcaca tgggtggtgg gaggaaggagg ggatagcaaa gacacacaga
1440
agaggggtaca ggggtgggtga gaaagaaagt agaagggtta atacccccaa agaacaaggc
1500
caactacacc tgggtgagcct cagaggggaca gaaaccagg aatgattcct gtgatagggc
1560
tgaggagacc aagaggacgg attcgtctca ggcttgggac acatcgagga cagtgggtgt
1620
tcttctccag cgggtgacccc ctgcattagg caaggaggag cccagaggag agtggagacc
1680
ttcagagggg gccgttggga ggggtactgac tgctttcttc cagctcttca gtcccgcct
1740
tgggcaggac gaagggaatg tgggaaacaa gggcgaaagg aaaggaagga tggttttgag
1800
caatgaaatg ctgctgcatg gaaagtgggc atccagaccc tgcccagcat ggcctcagcc
1860
tcttctgtt cgtggaccga gggagaagg aataaagggc catgggcatt ctccgctctg
1920
tcccagcct gccctcctcc ccttgacact gggcttatcc cacattaata gcccatcctg
1980
aagctcagca attgccccga agataggctg agcagatccc atcctcaggt tccactgtct
2040
atacacaaa accatgcaaa gaggaggaag agaaaggagg caaagtagaa ttcagacagg
2100
aaagggtggt tcaaagggga atatactaca ggaagaacag agaggcggct ctcaaggaga
2160
gggccccatg acagcacagc aatacacaag cacacctgac acaggctggc acgcctcccc
2220
ccaagggtgg gctggtgggt ctacatgact tctctgcatc ctgaggatcg gccgggcccc
2280
aggaagaacc acttgctca tccctgtctt tggcaagtgc acgggtggtg tggaggaaag
2340
gattccatgg gtgtccaaag atctcacact gctaacaccc tcacgctcct tcatcaacag
2400
gaagagagga acaggaccct ctttaacgag ggcaaggagt ggcttctct gagcttgtaa
2460
ctttcaaatt aagcacttga ctactgttt ctctataact aacaggcaat ctctctcttt
2520
atgccaacaa ttaactggga gctagggttaa attatttggc tagataaaac taccagctag
2580
atggatttat ttggtgccct catacagaat gctgtagaaa atgtaaagaa gagaaagctc
2640
cttccagcta gaagcacatg ggactgcttc taggatggaa acaagtctg ctattttcac
2700
aatccctaag tgttctc
2717

<210> 3306

<211> 319
 <212> PRT
 <213> Homo sapiens

<400> 3306

Xaa	Asp	Pro	Arg	Tyr	Phe	Leu	Gln	Met	Thr	Glu	Thr	Thr	Val	Lys	Thr
1				5					10					15	
Ala	Ala	Trp	Phe	Met	Ala	Asn	Val	Gln	Val	Ser	Gly	Gly	Gly	Pro	Ser
			20					25					30		
Ile	Ser	Leu	Val	Met	Lys	Thr	Pro	Arg	Val	Ala	Lys	Asn	Glu	Ala	Leu
		35					40					45			
Trp	His	Pro	Thr	Leu	Asn	Leu	Pro	Leu	Ser	Pro	Gln	Gly	Thr	Val	Arg
	50					55				60					
Thr	Ala	Val	Glu	Phe	Gln	Val	Met	Thr	Gln	Thr	Gln	Ser	Leu	Ser	Phe
65					70				75					80	
Leu	Leu	Gly	Ser	Ser	Ala	Ser	Leu	Asp	Cys	Gly	Phe	Ser	Met	Ala	Pro
				85				90						95	
Gly	Leu	Asp	Leu	Ile	Ser	Val	Glu	Trp	Arg	Leu	Gln	His	Lys	Gly	Arg
			100					105					110		
Gly	Gln	Leu	Val	Tyr	Ser	Trp	Thr	Ala	Gly	Gln	Gly	Gln	Ala	Val	Arg
		115					120					125			
Lys	Gly	Ala	Thr	Leu	Xaa	Ala	Cys	Thr	Thr	Gly	His	Gly	Xaa	Arg	Asp
	130					135					140				
Ala	Ser	Leu	Thr	Leu	Pro	Gly	Leu	Thr	Ile	Gln	Asp	Glu	Gly	Thr	Tyr
145					150					155					160
Ile	Cys	Gln	Ile	Thr	Thr	Ser	Leu	Tyr	Arg	Ala	Gln	Gln	Ile	Ile	Gln
				165					170					175	
Leu	Asn	Ile	Gln	Ala	Ser	Pro	Lys	Val	Arg	Leu	Ser	Leu	Ala	Asn	Glu
			180					185					190		
Ala	Leu	Leu	Pro	Thr	Leu	Ile	Cys	Asp	Ile	Ala	Gly	Tyr	Tyr	Pro	Leu
		195					200					205			
Asp	Val	Val	Val	Thr	Trp	Thr	Arg	Glu	Glu	Leu	Gly	Gly	Ser	Pro	Ala
	210					215					220				
Gln	Val	Ser	Gly	Ala	Ser	Phe	Ser	Ser	Leu	Arg	Gln	Ser	Val	Ala	Gly
225					230					235				240	
Thr	Tyr	Ser	Ile	Ser	Ser	Ser	Leu	Thr	Ala	Glu	Pro	Gly	Leu	Cys	Arg
			245						250					255	
Cys	His	Leu	His	Leu	Pro	Gly	His	Thr	His	Leu	Ser	Gly	Gly	Ala	Pro
			260					265					270		
Trp	Gly	Gln	His	Pro	Gly	Cys	Pro	Thr	Arg	Ala	Glu	Asn	Ser	Leu	Gly
		275					280						285		
Ser	His	Leu	Cys	Gln	Gln	Ser	Leu	Pro	Ser	Cys	Thr	Asp	Val	Pro	Gly
	290					295					300				
Ala	Ser	Glu	Thr	Ala	Ser	Thr	Tyr	Arg	Thr	Trp	Ala	Ala	Ser	Gly	
305					310					315					

<210> 3307
 <211> 352
 <212> DNA
 <213> Homo sapiens

<400> 3307

ggatcctggg ctggtgtcca ggatggggct cccgcgtgct cttgcgctgc cctctggtgg
 60

ccgctctctggg tccttgccacc ccgacccagg ggccagcctg ccctgtcctg tcctgatacc
 120
 gaggtggggag ccctgccttg gccaggggtgg ccgtgttgac gggtctctggg actgtgacat
 180
 tggaaggcga ggcagggtcac cagcactgtc ctctgcagga tgggctggga ttcatttggc
 240
 agcttctcag ggccctgtgtc cggctgggtg gtccctgtgc tgcccaaacc aggtgtccac
 300
 atttccgggt cctatgcgca gagaaggggg caggtgggtg cttgggtgga ga
 352

<210> 3308

<211> 110

<212> PRT

<213> Homo sapiens

<400> 3308

Met	Gly	Leu	Pro	Arg	Ala	Leu	Ala	Leu	Pro	Ser	Gly	Gly	Arg	Ser	Gly
1				5					10					15	
Ser	Leu	His	Pro	Asp	Pro	Gly	Ala	Ser	Leu	Pro	Cys	Pro	Val	Leu	Ile
			20					25					30		
Pro	Arg	Trp	Glu	Pro	Cys	Leu	Gly	Gln	Gly	Gly	Arg	Val	Asp	Gly	Ser
		35					40					45			
Trp	Asp	Cys	Asp	Ile	Gly	Arg	Arg	Gly	Arg	Ser	Pro	Ala	Leu	Ser	Ser
	50					55					60				
Ala	Gly	Trp	Ala	Gly	Ile	His	Leu	Ala	Ala	Ser	Gln	Gly	Leu	Cys	Pro
65					70					75				80	
Ala	Gly	Trp	Ser	Leu	Cys	Cys	Pro	Asn	Gln	Val	Ser	Thr	Phe	Pro	Ala
			85					90						95	
Pro	Met	Arg	Arg	Glu	Gly	Gly	Arg	Trp	Trp	Leu	Gly	Trp	Arg		
			100					105						110	

<210> 3309

<211> 737

<212> DNA

<213> Homo sapiens

<400> 3309

ggatcctggg cctggagaag aggcataaat gtccaccaca ggggctctgc cggtcaggat
 60
 caagggtcaca ctggatgagg gaggcctgac cctctcccgg gctgagccca cctgtgctgc
 120
 ccccaggacc ccaagtacca gggctctgcgg gcacgtggcc gggagatccg gaaggagctt
 180
 gttcacctgt accccaggga ggcccagctt gaggagcagt tctacctgca ggcgctgaag
 240
 ctgcccaccc agaccacccc agacgtgccc gtcggggatg agagccaggc tcgagtgtc
 300
 cacatgggtcg gagacaagcc agttttctcc ttccaacctc ggggccacct ggaaattggc
 360
 gagaaactcg acatcatccg tcagaagcgc ctgtcccacg tgtctggcca ccggtcctat
 420
 tacctgcgcg gggctggagc cctcctgcag caggcctgg tcaacttcac attcaacaag
 480

cttctccgcc ggggcttcac ccccatgacg gtgccagacc ttctccgcgg agcagtgttt
 540
 gaaggctgtg ggatgacacc aaatgccaac ccatcccaaa tttacaacat cgaccctgcc
 600
 cgcttcaaag atctcaacct tgctggaaca gcggaggtgg ggcttgcagg ctacttcatg
 660
 gaccacaccg tggccttcag ggacctgcca gtcaggatgg tttgctccag cacctgctac
 720
 cgggcagaga caaacac
 737

<210> 3310
 <211> 210
 <212> PRT
 <213> Homo sapiens

<400> 3310
 Ala His Leu Cys Cys Pro Gln Asp Pro Lys Tyr Gln Gly Leu Arg Ala
 1 5 10 15
 Arg Gly Arg Glu Ile Arg Lys Glu Leu Val His Leu Tyr Pro Arg Glu
 20 25 30
 Ala Gln Leu Glu Glu Gln Phe Tyr Leu Gln Ala Leu Lys Leu Pro Asn
 35 40 45
 Gln Thr His Pro Asp Val Pro Val Gly Asp Glu Ser Gln Ala Arg Val
 50 55 60
 Leu His Met Val Gly Asp Lys Pro Val Phe Ser Phe Gln Pro Arg Gly
 65 70 75 80
 His Leu Glu Ile Gly Glu Lys Leu Asp Ile Ile Arg Gln Lys Arg Leu
 85 90 95
 Ser His Val Ser Gly His Arg Ser Tyr Tyr Leu Arg Gly Ala Gly Ala
 100 105 110
 Leu Leu Gln His Gly Leu Val Asn Phe Thr Phe Asn Lys Leu Leu Arg
 115 120 125
 Arg Gly Phe Thr Pro Met Thr Val Pro Asp Leu Leu Arg Gly Ala Val
 130 135 140
 Phe Glu Gly Cys Gly Met Thr Pro Asn Ala Asn Pro Ser Gln Ile Tyr
 145 150 155 160
 Asn Ile Asp Pro Ala Arg Phe Lys Asp Leu Asn Leu Ala Gly Thr Ala
 165 170 175
 Glu Val Gly Leu Ala Gly Tyr Phe Met Asp His Thr Val Ala Phe Arg
 180 185 190
 Asp Leu Pro Val Arg Met Val Cys Ser Ser Thr Cys Tyr Arg Ala Glu
 195 200 205
 Thr Asn
 210

<210> 3311
 <211> 486
 <212> DNA
 <213> Homo sapiens

<400> 3311
 nngcggagcg gcggcggtgg cgacggcgat gggaccccag cgagagatct gcagctaggc
 60

tggctgcact tgctccacgg gtcaggggat cggaggggga ttgaagaatg cgccattaaa
 120
 aggaaagatc aaggagtaaa ccagaagaag aagaaaaaga ggacttcaaa gctgggaagg
 180
 atgagttctt gcagcaacgt ctgtgggtcc aggcaggcac aggctgcagc tgagggtggt
 240
 taccagcgt atggagtccg gtcctacctg caccagtttt atgaggactg tacagcctca
 300
 atttgggagt atgaggatga tttccagatc caaagatcac ctaacagggtg gagctcagta
 360
 ttctggaagg ttggactcat ctcaggatca gtttttgtga tcctcggatt gactgttctg
 420
 gcagtgggct ttcttgtgcc ccccaaaatc gaagcatttg gcgaagccga ttttgtgggtg
 480
 gtcgac
 486

<210> 3312

<211> 102

<212> PRT

<213> Homo sapiens

<400> 3312

Met	Ser	Ser	Cys	Ser	Asn	Val	Cys	Gly	Ser	Arg	Gln	Ala	Gln	Ala	Ala
1				5					10				15		
Ala	Glu	Gly	Gly	Tyr	Gln	Arg	Tyr	Gly	Val	Arg	Ser	Tyr	Leu	His	Gln
		20						25				30			
Phe	Tyr	Glu	Asp	Cys	Thr	Ala	Ser	Ile	Trp	Glu	Tyr	Glu	Asp	Asp	Phe
		35					40				45				
Gln	Ile	Gln	Arg	Ser	Pro	Asn	Arg	Trp	Ser	Ser	Val	Phe	Trp	Lys	Val
		50				55					60				
Gly	Leu	Ile	Ser	Gly	Thr	Val	Phe	Val	Ile	Leu	Gly	Leu	Thr	Val	Leu
65					70					75				80	
Ala	Val	Gly	Phe	Leu	Val	Pro	Pro	Lys	Ile	Glu	Ala	Phe	Gly	Glu	Ala
			85						90					95	
Asp	Phe	Val	Val	Val	Asp										
			100												

<210> 3313

<211> 1791

<212> DNA

<213> Homo sapiens

<400> 3313

nggctcggga gacgtacgag gaggaccggg agtacgagag ccaggccaag cgtctcaaga
 60
 ccgaggaggg ggagatcgac tactcggccg aggaaggcga gaaccgcggt gaagcgacgc
 120
 cccggggcgg gtcgagttgg cggcgggcgg ggcgagantgc gttctcgtca gccggaaggg
 180
 ctgcgaagtc atcataaagt ttctgtttca cccgtcgtcc atgttcgagg actctgtgaa
 240
 tctgtggtgg aagcagacct cgtggaagcg ctggaaaaat ttgggacaat atgctatgtg
 300

atgatgatgc catttaaacg acaggctcta gtggaatttg aaaacataga tagtgccaaa
360
gaatgtgtga cttttgctgc agatgaaccc gtgtacattg ctgggtcaaca ggcttttttc
420
aactattcta caagcaaaag gatcactcgg ccaggaaata ctgatgatcc atcaggaggc
480
aacaagttc ttctgctctc aattcagaat ccgctttatc caattacagt ggatgtttta
540
tatactgtat gcaaccctgt tggcaaagtg caacgtattg ttatattcaa gagaaatggg
600
atacaagcaa tggttgagtt tgaatcagtc ctttgtgcc agaaagctaa agcagcactc
660
aatggagctg atatatatgc tggatgttgc acactaaaaa ttgaatatgc acggccaact
720
cgtctaaatg ttattaggaa tgacaatgac agttgggact acactaaacc atatttggga
780
agacgagata gaggaaaggg tcgccagaga caagccattt tgggagaaca cccttcttcg
840
tttagacatg atggctatgg atcccatggg ccattattgc ctttaccaag tcgttacaga
900
atgggctctc gagatacacc tgaacttggt gcttatccat taccacaggc ttcttcctct
960
tacatgcatg gaggaaatcc ctctggttca gttgtaatgg ttagtggatt acatcaacta
1020
aaaatgaatt gttcaagagt cttcaacctg ttctgcttat atggaaatat tgagaaggta
1080
aaatttatga agaccattcc tgggtacagca ctggtagaaa tgggtgatga gtatgctgta
1140
gaaagagctg tcacacacct taataatgtc aaattatttg ggaaaagact taatgtttgc
1200
gtgtctaaac aacattcagt tgttccaagt caaatatttg agctggagga tgggtaccagc
1260
agctacaaag attttgcaat gagcaaaaat aatcgcttta caagtgctgg ccaagcatct
1320
agaatataa tccagccacc ctctgtgtt ttgcattatt ataatgttcc attgtgtgtc
1380
acagaagaga ccttcacaaa gttgtgtaat gaccatgaag ttcttacatt catcaaatat
1440
aaagtgtttg atgcaaaacc ttcagccaaa acactttctg ggctattaga atgggagtgc
1500
aaaactgatg cagtagaagc ccttacggca ctgaatcact atcagataag agtgccgaat
1560
ggttccaatc cctatacatt gaagctttgc ttttctacat catcccatth ataagaagag
1620
aagagcatgt tagaatttat gttcaccttt attacaattt caaagctaca cttcattaaa
1680
aaaaaatcta aaatggttga tctcatgttg ctttgcttac ttaagatcc tgttctgtaa
1740
taaacatatt ttgccttgag taaatttgtt gtaagcttaa aaaaaaaaaa a
1791

<210> 3314

<211> 537

<212> PRT

<213> Homo sapiens

<400> 3314

Xaa Leu Gly Arg Arg Thr Arg Arg Thr Gly Ser Thr Arg Ala Arg Pro
 1 5 10 15
 Ser Val Ser Arg Pro Arg Arg Gly Arg Ser Thr Thr Arg Pro Arg Lys
 20 25 30
 Ala Arg Thr Ala Val Lys Arg Arg Pro Gly Ala Gly Arg Val Gly Gly
 35 40 45
 Gly Gly Gly Arg Xaa Arg Ser Arg Gln Pro Glu Gly Leu Arg Ser His
 50 55 60
 His Lys Val Ser Val Ser Pro Val Val His Val Arg Gly Leu Cys Glu
 65 70 75 80
 Ser Val Val Glu Ala Asp Leu Val Glu Ala Leu Glu Lys Phe Gly Thr
 85 90 95
 Ile Cys Tyr Val Met Met Met Pro Phe Lys Arg Gln Ala Leu Val Glu
 100 105 110
 Phe Glu Asn Ile Asp Ser Ala Lys Glu Cys Val Thr Phe Ala Ala Asp
 115 120 125
 Glu Pro Val Tyr Ile Ala Gly Gln Gln Ala Phe Phe Asn Tyr Ser Thr
 130 135 140
 Ser Lys Arg Ile Thr Arg Pro Gly Asn Thr Asp Asp Pro Ser Gly Gly
 145 150 155 160
 Asn Lys Val Leu Leu Leu Ser Ile Gln Asn Pro Leu Tyr Pro Ile Thr
 165 170 175
 Val Asp Val Leu Tyr Thr Val Cys Asn Pro Val Gly Lys Val Gln Arg
 180 185 190
 Ile Val Ile Phe Lys Arg Asn Gly Ile Gln Ala Met Val Glu Phe Glu
 195 200 205
 Ser Val Leu Cys Ala Gln Lys Ala Lys Ala Ala Leu Asn Gly Ala Asp
 210 215 220
 Ile Tyr Ala Gly Cys Cys Thr Leu Lys Ile Glu Tyr Ala Arg Pro Thr
 225 230 235 240
 Arg Leu Asn Val Ile Arg Asn Asp Asn Asp Ser Trp Asp Tyr Thr Lys
 245 250 255
 Pro Tyr Leu Gly Arg Arg Asp Arg Gly Lys Gly Arg Gln Arg Gln Ala
 260 265 270
 Ile Leu Gly Glu His Pro Ser Ser Phe Arg His Asp Gly Tyr Gly Ser
 275 280 285
 His Gly Pro Leu Leu Pro Leu Pro Ser Arg Tyr Arg Met Gly Ser Arg
 290 295 300
 Asp Thr Pro Glu Leu Val Ala Tyr Pro Leu Pro Gln Ala Ser Ser Ser
 305 310 315 320
 Tyr Met His Gly Gly Asn Pro Ser Gly Ser Val Val Met Val Ser Gly
 325 330 335
 Leu His Gln Leu Lys Met Asn Cys Ser Arg Val Phe Asn Leu Phe Cys
 340 345 350
 Leu Tyr Gly Asn Ile Glu Lys Val Lys Phe Met Lys Thr Ile Pro Gly
 355 360 365
 Thr Ala Leu Val Glu Met Gly Asp Glu Tyr Ala Val Glu Arg Ala Val
 370 375 380
 Thr His Leu Asn Asn Val Lys Leu Phe Gly Lys Arg Leu Asn Val Cys
 385 390 395 400
 Val Ser Lys Gln His Ser Val Val Pro Ser Gln Ile Phe Glu Leu Glu

```
<210> 3315
<211> 934
<212> DNA
<213> Homo sapiens
```

```

<400> 3315
ngggcggcgg catggcagca tcttccctga cggtcacctt agggcgggctg gcgctccgcgt
60
gcagccacag catcctgaga ccttcggggc ccggagcagc ctccctttgg tctgcttctc
120
gaaggttcaa ttcacagagc acttcatatc taccagggtta atatcaaaat atatgttcct
180
aaaacatccc tgagttcacc accttggcca gaagttgttc tgccagaccc agttgaggag
240
accagacacc atgcagaggt cgtgaagaag gtgaatgaga tgatcgtcac ggggcagtat
300
ggcaggctct ttgccgtggt gcactttgcc agccgccagt ggaagggtgac ctctgaagac
360
ctgatcttaa ttggaaatga actagacctt gcgtgtggag agagaattcg actggagaag
420
gtcctgctgg ttggggcaga caacttcacg ctgcttggca agccactcct cggaaaggat
480
cttgttcgag tagaagccac agtcattgaa aagacagaat catggccaag aatcattatg
540
agattcagga aaaggaaaaa cttcaagaag aaaagaatcg tcacgacccc gcagactgtc
600
ctccggataa acagcattga gattgctccg tgtttgttgt gattaccgag ttaataactta
660
caaaaggata aaaataaaact cctgcttccc aaggagacca ggtttctgtg ttctggttta
720
aagccgtgca tgccgtgtgt agatagttta actggagcag catgtctgta agcaccaggc
780
ccccgagcca gagaaaacag gaactggggg agaatgacaa gcatggccct ccaggggctg
840
gataaatagt attcttggca gccctccacc ccatgtggcg gcggcagggc ccaggggagt
900

```

ggggcgggga tgcagattga tcttggagct gcag
934

<210> 3316
<211> 187
<212> PRT
<213> Homo sapiens

<400> 3316

Asp	Leu	Arg	Gly	Pro	Glu	Gln	Pro	Pro	Phe	Gly	Leu	Leu	Leu	Glu	Gly
1				5					10					15	
Ser	Ile	His	Arg	Ala	Leu	His	Ile	Tyr	Gln	Gly	Asn	Ile	Lys	Ile	Tyr
			20					25					30		
Val	Pro	Lys	Thr	Ser	Leu	Ser	Ser	Pro	Pro	Trp	Pro	Glu	Val	Val	Leu
		35					40					45			
Pro	Asp	Pro	Val	Glu	Glu	Thr	Arg	His	His	Ala	Glu	Val	Val	Lys	Lys
	50					55					60				
Val	Asn	Glu	Met	Ile	Val	Thr	Gly	Gln	Tyr	Gly	Arg	Leu	Phe	Ala	Val
65					70					75					80
Val	His	Phe	Ala	Ser	Arg	Gln	Trp	Lys	Val	Thr	Ser	Glu	Asp	Leu	Ile
				85					90					95	
Leu	Ile	Gly	Asn	Glu	Leu	Asp	Leu	Ala	Cys	Gly	Glu	Arg	Ile	Arg	Leu
			100					105						110	
Glu	Lys	Val	Leu	Leu	Val	Gly	Ala	Asp	Asn	Phe	Thr	Leu	Leu	Gly	Lys
		115					120					125			
Pro	Leu	Leu	Gly	Lys	Asp	Leu	Val	Arg	Val	Glu	Ala	Thr	Val	Ile	Glu
	130					135					140				
Lys	Thr	Glu	Ser	Trp	Pro	Arg	Ile	Ile	Met	Arg	Phe	Arg	Lys	Arg	Lys
145					150					155					160
Asn	Phe	Lys	Lys	Lys	Arg	Ile	Val	Thr	Thr	Pro	Gln	Thr	Val	Leu	Arg
				165					170					175	
Ile	Asn	Ser	Ile	Glu	Ile	Ala	Pro	Cys	Leu	Leu					
			180					185							

<210> 3317
<211> 1665
<212> DNA
<213> Homo sapiens

<400> 3317

ntcattatatt tccgaaatga atgtagtaga atttcagaat ggcttctgga acatgtttcc
60
tggttaaaagg cctagaatat cctgcagtgg tagagtttgc tccattccag aagatagcca
120
aaaagaagct gagaaaaaaa gatgccaaga ctggaagcat cgaagatggt gagccctttc
180
caagtgctac gttatgaagc tgccaaatta agaacactga gcaaagttaa ttctcccgta
240
gttgggaaag attatatatta ttttcttcct actttttaat gtctagatcc agaataaag
300
aagtttttag aaacctactg tgtggaggaa gagaagacca gtgccaaccc tgagactctg
360
ctgggggaga tggaggcgaa gacaagagag ctcattgcta gaagaaccac acctcttttg
420

gaatatatta aaaatagaaa attagaaaaag cagagaattc gagaagagaa gcgagaagaa
 480
 cggaggagga gagagttaga aaagaaacgt ttgcgggaag aggaaaaaag aagaagaaga
 540
 gaagaagaaa gatgcaaaaa aaaagagaca gataaacaga agaaaattgc agagaaagaa
 600
 gtaaggatta agcttcttaa gaaaccagaa aaggagagg aaccaaccac agagaaacca
 660
 aaagaaagag gagaggagat tgatactgga ggtggcaagc aggaatcctg tgcccccggt
 720
 gcagtcgtaa aagccaggcc catggaaggc tcgctggagg agccccagga gacgtcacac
 780
 agcggcagtg ataaagagca cagggatgtg gagagatctc aagaacaaga atctgaagca
 840
 caaagatacc atgtggatga cggcaggagg cacagagctc accacgagcc tgaacggctt
 900
 tccagaagga gtgaggatga gcagagatgg gggaaaggac ctggccaaga cagaggggaag
 960
 aaggggagcc aggacagcgg ggctccgggg gaggccatgg agagactggg aagagcgcag
 1020
 aggtgtgacg acagtccagc acccagaaaa gagcgactgg caaacaaggt ttttattaaa
 1080
 cccaaaaaga aaaatgtgtc tggctgtctt aagggtccagg ctgcatgctg accatgtcac
 1140
 cccacttgg ccttgtgtct tggggaacgc agtgctttga gcattttcaa gagcagtttt
 1200
 tcctgaaagt cagatcccag agtgagacta gtcacatctt tttctcagat aatcaaatta
 1260
 tttttacca ggaaaaagaa agattttatt tagtataaaa ctagcacgtt tatatgatct
 1320
 acttgagaat aagattatta aatttaccct tgagacagga aggaaagttt taatgatatt
 1380
 tcatggaggt ttcttcaca ttattaacaa cattctgatt attggtgaat attcccatgg
 1440
 ctcacaaaca cctgtaagtt agatctgcac ggacggtgag cacaggactg tggttacccc
 1500
 cttagccaag caaacaactt ttttttttca ggagctaatt tttgttcagg ttgcattttc
 1560
 ccagcgcagc actacagatg gcatcacctt tctgacagca ccaggcccca ccctggcctc
 1620
 ctagcaaact gagggctgcc taggggtcca gttcccactc acctc
 1665

<210> 3318

<211> 253

<212> PRT

<213> Homo sapiens

<400> 3318

Met	Glu	Ala	Lys	Thr	Arg	Glu	Leu	Ile	Ala	Arg	Arg	Thr	Thr	Pro	Leu
1			5				10							15	
Leu	Glu	Tyr	Ile	Lys	Asn	Arg	Lys	Leu	Glu	Lys	Gln	Arg	Ile	Arg	Glu
		20					25						30		
Glu	Lys	Arg	Glu	Glu	Arg	Arg	Arg	Glu	Leu	Glu	Lys	Lys	Arg	Leu	

35	40	45
Arg Glu Glu Glu Lys Arg Arg Arg Arg Glu Glu Glu Arg Cys Lys Lys		
50	55	60
Lys Glu Thr Asp Lys Gln Lys Lys Ile Ala Glu Lys Glu Val Arg Ile		
65	70	75
Lys Leu Leu Lys Lys Pro Glu Lys Gly Glu Glu Pro Thr Thr Glu Lys		80
85	90	95
Pro Lys Glu Arg Gly Glu Glu Ile Asp Thr Gly Gly Gly Lys Gln Glu		
100	105	110
Ser Cys Ala Pro Gly Ala Val Val Lys Ala Arg Pro Met Glu Gly Ser		
115	120	125
Leu Glu Glu Pro Gln Glu Thr Ser His Ser Gly Ser Asp Lys Glu His		
130	135	140
Arg Asp Val Glu Arg Ser Gln Glu Gln Glu Ser Glu Ala Gln Arg Tyr		
145	150	155
His Val Asp Asp Gly Arg Arg His Arg Ala His His Glu Pro Glu Arg		
165	170	175
Leu Ser Arg Arg Ser Glu Asp Glu Gln Arg Trp Gly Lys Gly Pro Gly		
180	185	190
Gln Asp Arg Gly Lys Lys Gly Ser Gln Asp Ser Gly Ala Pro Gly Glu		
195	200	205
Ala Met Glu Arg Leu Gly Arg Ala Gln Arg Cys Asp Asp Ser Pro Ala		
210	215	220
Pro Arg Lys Glu Arg Leu Ala Asn Lys Val Phe Ile Lys Pro Lys Lys		
225	230	235
Lys Asn Val Ser Gly Cys Leu Lys Val Gln Ala Ala Cys		240
245	250	

<210> 3319
 <211> 1541
 <212> DNA
 <213> Homo sapiens

<400> 3319
 nncggccgcg gggcgcgccc gctcccaagt cggtctctc cccgccgggg ccgctttgcc
 60
 tcgggtctcc ccattctcca ggtccctga actgcacagt cggaggccgt gggcggcggg
 120
 ctctgcctcc gccgaggac agccggatcg cccctctgct tcccgcaact gccctgatca
 180
 cccccgtcc cagcccttga gtgaacgtcc ttctgagcgg cttcctgggg tcctcccccac
 240
 gtcccaaagg ccggcaagat ggtgtcctgg atgatctgtc gcctggtggt gctggtgttt
 300
 gggatgctgt gtccagctta tgcttcctat aaggctgtga agaccaagaa cattcgtgaa
 360
 tatgtgcggt ggatgatgta ctggattgtt tttgcactct tcatggcagc agagatcggt
 420
 acagacattt ttatctcctg gttccctttc tactatgaga tcaagatggc cttcgtgctg
 480
 tggtgctct caccctacac caagggcgcc agcctgcttt accgcaagtt tgtccaccgc
 540
 tcctgtccc gccatgagaa ggagatcgac gcgtacatcg tgcaggccaa ggagcgcagc
 600

tacgagaccg tgctcagctt cggaagcgg ggcctcaaca ttgccgcctc cgctgctgtg
 660
 caggctgccca ccaagagtca gggggcgctg gccggcaggc tgcggagctt ctccatgcag
 720
 gacctgcgct ccatctctga cgcacctgcc cctgcctacc atgacccccct ctacctggag
 780
 gaccaggtgt cccaccggag gccaccatt ggggtaccggg ccgggggcct gcaggacagc
 840
 gacaccgagg atgagtgttg gtcagatact gaggcagtcc cccggggcgc agcccgcccc
 900
 cgagagaagc ccctaattccg cagccagagc ctgcgtgtgg tcaagaggaa gccaccggtg
 960
 cgggaggggca cctcgcgctc cctgaagggt cggacgagga aaaagactgt gccctcagac
 1020
 gtggacagct agggctctgt gcatctgccc ccttcttacc tcgtgccctg cagggtcca
 1080
 gggctatttg gagggacctt gggctgcaca tctggcctgc ctgcaccagc tgctggggc
 1140
 ccaccctcct gactcctgct gatggttaag ggccgggagc agatgctgcc aaggccacat
 1200
 gcagggatgc acccacaatg taccaaagca ggctgggccc agggttctat ttattgcctt
 1260
 gctctgccct ctcccttccc cggttgtggg acaagagccc tccctgaacc cctgcaacc
 1320
 tccctgaacc cctgcaaag aaaccaaagc tccacctggg tgtgttcatt ccttctgtc
 1380
 cttcaaagta cttgatagcc tttcataagg cctggcacat gtgtcctggt tgtgtgtgtg
 1440
 tgtgttggtg agtgaggtca ggtttgcgag tgttttgata aataaatata taaaggggca
 1500
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa a
 1541

<210> 3320

<211> 256

<212> PRT

<213> Homo sapiens

<400> 3320

Val	Ser	Trp	Met	Ile	Cys	Arg	Leu	Val	Val	Leu	Val	Phe	Gly	Met	Leu
1				5				10						15	
Cys	Pro	Ala	Tyr	Ala	Ser	Tyr	Lys	Ala	Val	Lys	Thr	Lys	Asn	Ile	Arg
			20					25					30		
Glu	Tyr	Val	Arg	Trp	Met	Met	Tyr	Trp	Ile	Val	Phe	Ala	Leu	Phe	Met
		35					40				45				
Ala	Ala	Glu	Ile	Val	Thr	Asp	Ile	Phe	Ile	Ser	Trp	Phe	Pro	Phe	Tyr
		50				55					60				
Tyr	Glu	Ile	Lys	Met	Ala	Phe	Val	Leu	Trp	Leu	Leu	Ser	Pro	Tyr	Thr
65				70				75						80	
Lys	Gly	Ala	Ser	Leu	Leu	Tyr	Arg	Lys	Phe	Val	His	Pro	Ser	Leu	Ser
			85					90						95	
Arg	His	Glu	Lys	Glu	Ile	Asp	Ala	Tyr	Ile	Val	Gln	Ala	Lys	Glu	Arg
			100				105						110		
Ser	Tyr	Glu	Thr	Val	Leu	Ser	Phe	Gly	Lys	Arg	Gly	Leu	Asn	Ile	Ala

	115		120		125										
Ala	Ser	Ala	Ala	Val	Gln	Ala	Ala	Thr	Lys	Ser	Gln	Gly	Ala	Leu	Ala
	130		135		140										
Gly	Arg	Leu	Arg	Ser	Phe	Ser	Met	Gln	Asp	Leu	Arg	Ser	Ile	Ser	Asp
145				150					155					160	
Ala	Pro	Ala	Pro	Ala	Tyr	His	Asp	Pro	Leu	Tyr	Leu	Glu	Asp	Gln	Val
			165					170					175		
Ser	His	Arg	Arg	Pro	Pro	Ile	Gly	Tyr	Arg	Ala	Gly	Gly	Leu	Gln	Asp
		180					185						190		
Ser	Asp	Thr	Glu	Asp	Glu	Cys	Trp	Ser	Asp	Thr	Glu	Ala	Val	Pro	Arg
	195					200					205				
Ala	Pro	Ala	Arg	Pro	Arg	Glu	Lys	Pro	Leu	Ile	Arg	Ser	Gln	Ser	Leu
	210				215				220						
Arg	Val	Val	Lys	Arg	Lys	Pro	Pro	Val	Arg	Glu	Gly	Thr	Ser	Arg	Ser
225				230					235					240	
Leu	Lys	Val	Arg	Thr	Arg	Lys	Lys	Thr	Val	Pro	Ser	Asp	Val	Asp	Ser
			245					250					255		

<210> 3321

<211> 1536

<212> DNA

<213> Homo sapiens

<400> 3321

```

nnacgcgtcg tagacgttgg ggagcgggaa ggcaacggca gcgggatcgg gatgaacagc
60
ggcggcggtt tcggtttggg cttaggttcc ggctcacc ccacgtcggg gattcaggtg
120
acgaatctgt cgtcggcggt gaccagcgag cagatgcgga cgcttttttc ctctctagga
180
gaaatcgagg agctgcgggt ctaccccccg gacaacgcac ctcttgcttt ttcctccaaa
240
gtatgttatg ttaagtttcg tgatccatca agtggtggcg tggcccagca tctaactaac
300
acggttttta ttgacagagc tctgatagtt gttccttggt cagaaggtaa aatcccagag
360
gaatccaaag ccctctcttt attggctcct gctccaacca tgacaagtct gatgcctggt
420
gcaggattgc ttccaatacc gaccccaaat cctttgacta ctcttggtgt ttcacttagc
480
agtttgggag ctataccagc agcagcacta gaccccaaca ttgcaacact tggagagata
540
ccacagccac cacttatggg aaacgtggat ccttccaaaa tagatgaaat taggagaacg
600
gtttatgttg gaaatctgaa ttcccagaca acgacagctg atcaactact tgaatttttt
660
aaacaagttg gagaagtgaa gtttgcggtt ggcagaataa atcactccaa caatgcaata
720
gtaaaacccc ctgagatgac acctcaggct gcagctaagg agttagaaga agtaatgaag
780
cgagtacgag aagctcagtc atttatctca gcagctattg aaccagagtc tggaaagagc
840
aatgaaagaa aaggcggtcg atctcgttcc catactcgct caaaatccag gtctagctca
900

```

aaatcccatt ctagaaggaa aagatcacaa tcaaaacaca ggagtagatc ccataataga
 960
 tcacgttcaa gacagaaaga cagacgtaga tctaagagcc cacataaaaa acgctctaaa
 1020
 tcaagggaga gacggaagtc aaggagtcgt tcgcattcac gggacaagag aaaagacact
 1080
 cgagaaaaga tcaaggaaaa ggaaagagtg aaagagaaag acagggaaaa ggagagagag
 1140
 agggaaaagg aacgtgaaaa agaaaaggaa cggggtaaaa acaaagaccg ggacaaggaa
 1200
 cgggaaaagg accgggaaaa agacaaggaa aaggacagag agagagaacg ggaaaaagag
 1260
 catgagaagg atcgagacaa agagaaggaa aaggaacagg acaaagaaaa ggaacgagaa
 1320
 aaagacagat ccaaagagat agatgaaaaa aagaaagaag gataaaaaat ccagaacacc
 1380
 acccaggagt tacaatgcat cgccaagatc tcgtagttcc agcagggaaa ggcgtaggag
 1440
 gaggagcagg agttcttcca gatcgccaag aacatcaaaa accataaaaa ggaaatcttc
 1500
 tagatctccg tccccagga gaaataagaa ggataa
 1536

<210> 3322

<211> 454

<212> PRT

<213> Homo sapiens

<400> 3322

Xaa	Arg	Val	Val	Asp	Val	Gly	Glu	Arg	Glu	Gly	Asn	Gly	Ser	Gly	Ile
1				5					10					15	
Gly	Met	Asn	Ser	Gly	Gly	Gly	Phe	Gly	Leu	Gly	Leu	Gly	Phe	Gly	Leu
			20					25					30		
Thr	Pro	Thr	Ser	Val	Ile	Gln	Val	Thr	Asn	Leu	Ser	Ser	Ala	Val	Thr
		35					40					45			
Ser	Glu	Gln	Met	Arg	Thr	Leu	Phe	Ser	Phe	Leu	Gly	Glu	Ile	Glu	Glu
	50					55				60					
Leu	Arg	Leu	Tyr	Pro	Pro	Asp	Asn	Ala	Pro	Leu	Ala	Phe	Ser	Ser	Lys
65				70					75					80	
Val	Cys	Tyr	Val	Lys	Phe	Arg	Asp	Pro	Ser	Ser	Val	Gly	Val	Ala	Gln
			85					90					95		
His	Leu	Thr	Asn	Thr	Val	Phe	Ile	Asp	Arg	Ala	Leu	Ile	Val	Val	Pro
			100					105					110		
Cys	Ala	Glu	Gly	Lys	Ile	Pro	Glu	Glu	Ser	Lys	Ala	Leu	Ser	Leu	Leu
		115					120				125				
Ala	Pro	Ala	Pro	Thr	Met	Thr	Ser	Leu	Met	Pro	Gly	Ala	Gly	Leu	Leu
	130					135				140					
Pro	Ile	Pro	Thr	Pro	Asn	Pro	Leu	Thr	Thr	Leu	Gly	Val	Ser	Leu	Ser
145				150						155				160	
Ser	Leu	Gly	Ala	Ile	Pro	Ala	Ala	Ala	Leu	Asp	Pro	Asn	Ile	Ala	Thr
			165					170					175		
Leu	Gly	Glu	Ile	Pro	Gln	Pro	Pro	Leu	Met	Gly	Asn	Val	Asp	Pro	Ser
		180						185				190			
Lys	Ile	Asp	Glu	Ile	Arg	Arg	Thr	Val	Tyr	Val	Gly	Asn	Leu	Asn	Ser

195	200	205
Gln Thr Thr Ala Asp	Gln Leu Leu Glu Phe Phe Lys Gln Val Gly	
210	215	220
Glu Val Lys Phe Ala Asp	Gly Arg Ile Asn His Ser Asn Asn Ala Ile	
225	230	235
Val Lys Pro Pro Glu Met Thr Pro Gln Ala Ala Lys Glu Leu Glu		240
245	250	255
Glu Val Met Lys Arg Val Arg Glu Ala Gln Ser Phe Ile Ser Ala Ala		
260	265	270
Ile Glu Pro Glu Ser Gly Lys Ser Asn Glu Arg Lys Gly Gly Arg Ser		
275	280	285
Arg Ser His Thr Arg Ser Lys Ser Arg Ser Ser Ser Lys Ser His Ser		
290	295	300
Arg Arg Lys Arg Ser Gln Ser Lys His Arg Ser Arg Ser His Asn Arg		
305	310	315
Ser Arg Ser Arg Gln Lys Asp Arg Arg Arg Ser Lys Ser Pro His Lys		320
325	330	335
Lys Arg Ser Lys Ser Arg Glu Arg Arg Lys Ser Arg Ser Arg Ser His		
340	345	350
Ser Arg Asp Lys Arg Lys Asp Thr Arg Glu Lys Ile Lys Glu Lys Glu		
355	360	365
Arg Val Lys Glu Lys Asp Arg Glu Lys Glu Arg Glu Arg Glu Lys Glu		
370	375	380
Arg Glu Lys Glu Lys Glu Arg Gly Lys Asn Lys Asp Arg Asp Lys Glu		
385	390	395
Arg Glu Lys Asp Arg Glu Lys Asp Lys Glu Lys Asp Arg Glu Arg Glu		400
405	410	415
Arg Glu Lys Glu His Glu Lys Asp Arg Asp Lys Glu Lys Glu Lys Glu		
420	425	430
Gln Asp Lys Glu Lys Glu Arg Glu Lys Asp Arg Ser Lys Glu Ile Asp		
435	440	445
Glu Lys Lys Lys Glu Gly		
450		

<210> 3323

<211> 949

<212> DNA

<213> Homo sapiens

<400> 3323

```

ntcatgattc ttactagaa gtttgtgatt taaagatttg tgatgaagaa attccactat
60
gcaagtggca tggcttccca gttataaaat ctacagctctt gagagggcct cagagctaac
120
tttaccacca ggtactgtgc cttgcacaac ataaggcaag ccagcctctg actgaacatg
180
cctggaaaagg agttcaatat cttacttaac atctctcagg aagatgtgcc atcttcaact
240
ggaccattgg cttctgagta agctgtgtta ggcctgggct agacctaata gtttattatt
300
ggtggagaga aagatctgga aatacttgag gttattacat actagattag cttctaattg
360
gaaccatttt tcttttaaca gtgataaatt attatttccg aagttaactg ttcccttggt
420

```

cgtgatacac actcgattaa caaacataact gttgtatttt ttccagtttt gtttggtat
 480
 gccaccacag tcatccccag ggtctataca tactatgttt caactgtatt atttgccatt
 540
 tttggcatta gaatgcttcg ggaaggctta aagatgagcc ctgatgaggg tcaagaggaa
 600
 ctggaagaag ttcaagctga attaaagaag aaagatgaag aagtaagcca tggcactgtt
 660
 gatctggacc aaaaaggcac tcaactagga ataaacactc tacagagggt tctcagtggc
 720
 cccatctgtg tgatatgcgg ggctacacaa aaatagcttc ttttgcttg tctgttctt
 780
 atacctgtct gtgatctgac ttgggggttg tgtgaatgta gtagagaaag gaagctgaca
 840
 gatgaatact gaacacaggt aatcagtttc cttaattagg ttgattataa gctcctgaaa
 900
 agcaggaact gaattttata attttacctg ttttctccca tggagtctt
 949

<210> 3324

<211> 122

<212> PRT

<213> Homo sapiens

<400> 3324

Ile	Ile	Ile	Ser	Glu	Val	Asn	Cys	Ser	Leu	Gly	Arg	Asp	Thr	His	Ser
1				5					10					15	
Ile	Asn	Lys	His	Thr	Val	Val	Phe	Phe	Pro	Val	Leu	Phe	Gly	Tyr	Ala
			20					25					30		
Thr	Thr	Val	Ile	Pro	Arg	Val	Tyr	Thr	Tyr	Tyr	Val	Ser	Thr	Val	Leu
		35					40					45			
Phe	Ala	Ile	Phe	Gly	Ile	Arg	Met	Leu	Arg	Glu	Gly	Leu	Lys	Met	Ser
	50					55					60				
Pro	Asp	Glu	Gly	Gln	Glu	Leu	Glu	Glu	Val	Gln	Ala	Glu	Leu	Lys	
65					70					75				80	
Lys	Lys	Asp	Glu	Glu	Val	Ser	His	Gly	Thr	Val	Asp	Leu	Asp	Gln	Lys
			85						90					95	
Gly	Thr	Gln	Leu	Gly	Ile	Asn	Thr	Leu	Gln	Arg	Phe	Leu	Ser	Gly	Pro
			100						105					110	
Ile	Cys	Val	Ile	Cys	Gly	Ala	Thr	Gln	Lys						
		115						120							

<210> 3325

<211> 5055

<212> DNA

<213> Homo sapiens

<400> 3325

agacagtccg ggagctgctg cggccgcgct gtctgcttct cctgcgctc cttttcgccc
 60
 agcactagcg ccttaggcca gctcggggga tgtgagagcc gaagccctta gactggccag
 120
 gcacagagtc gggtcgggat ttgtcagcca agcctcggct ccagctccgc aatctcggga
 180

ctcaccgag cgaccaggc ccgacggcaa gttcggggcg gacggcggcc gccgcgcgt
240
caggctcagc ttcgctgccc gccagaaga tgaatccggc ctcggcgccc cctccgctcc
300
cgccgcctgg gcagcaagtg atccacgtca cgcaggacct agacacagac ctccaagccc
360
tcttcaactc tgtcatgaat ccgaagccta gctcgtggcg gaagaagatc ctgccggagt
420
ctttctttaa ggagcctgat tcgggctcgc actcgcgcca gtccagcacc gactcgtcgg
480
gcggccacca ggggcctcga ctggctgggg ggtgcccagc atgtccgctc gcactcgtcg
540
cccgcgtccc tgcagctggg caccggcgcg ggtgctcggg gtagccccgc gcagcagcac
600
gcgcacctcc gccagcagtc ctacgacgtg accgacgagc tgccactgcc cccgggctgg
660
gagatgacct tcacggccac tggccagagg tacttctca atcacataga aaaaatcacc
720
acatggcaag accctaggaa ggcgatgaat cagcctctga atcatatgaa cctccaccct
780
gccgtcagtt ccacaccagt gcctcagagg tccatggcag tatcccagcc aaatctcgtg
840
atgaatcacc aacaccagca gcagatggcc cccagtacc tgagccagca gaaccgcccc
900
actcagaacc caccgcgagg gctcatgagt atgcccagt cgctgaccac tcagcagcag
960
cagcagcaga aactgcggct tcagagaatc cagatggaga gagaaaggat tcgaatgcgc
1020
caagaggagc tcatgaggca ggaagctgcc ctctgtcgac agctccccat ggaagctgag
1080
actcttgccc cagttcaggc tgctgtcaac ccaccacga tgaccacaga catgagatcc
1140
atcactaata atagctcaga tcctttcttc aatggagggc catatcatte gagggagcag
1200
agcactgaca gtggcctggg gttagggtgc tacagtgtcc ccacaactcc ggaggacttc
1260
ctcagcaatg tggatgagat ggatacagga gaaaacgcag gacaaacacc catgaacatc
1320
aatccccaac agaccggtt ccctgatttc cttgactgtc ttccaggaac aaacgttgac
1380
ttaggaactt tggaatctga agacctgac cccctcttca atgatgtaga gtctgctctg
1440
aacaaaagtg agccctttct aacctggctg taatcactac cattgtaact tggatgtagc
1500
catgacctta catttcctgg gcctcttgga aaaagtgatg gagcagagca agtctgcagg
1560
tgcaccactt ccgcctcca tgaactgtgc tccctccttt ttatgttgcc agtttaatca
1620
ttgcctggtt ttgattgaga gtaacttaag ttaaataaa ataaatatc tattttcatt
1680
ttctgcaagc ctgcgttctt gtgacagatt atacagaatt gtgtctgcag gattgattat
1740
gcagaatact tttctcttct ttctctgctg ccccatggct aagctttatg ggtgttaatt
1800

gaaatttata caccaattga ttttaaacca taaaaagctg accacaggca gttacttctg
1860
agggcatctt ggtccaggaa atgtgcacaa aattcgacct gatttacagt ttcaaaaact
1920
gtattgatga cagtagtacc aaatgcttta aaaactatth aacttgagct ttaaaaatca
1980
ttgtatggat agtaaaattc tactgtatgg aatacaatgt aattttgaat ccatgctggc
2040
tctgatggct cttattagtc tgtatttata aaggcacaca gtcctattgt agcttatctt
2100
tcgttattht actgcagagc atctagacaa cttagtccct ccagcgggaa agtagcagca
2160
gcagcattag tcacagttct tacactacag atcttgtgaa agagaccagt ttggtactaa
2220
ttatgagcat tttattcaaa caaaagtht tgaatatata caactgggga tttaaaaaat
2280
tgcagcttag aatctgatgg ttttttht tcttgatgt tgtttgtttg tttttgagat
2340
cgagthttgc tcttgttgc caggctggaa tgcaatggca caatctcggc tcttgcaac
2400
ctctgccttc tgggttcaag cgattctct gccttagcct cccgagtagc tgggattaca
2460
ggcgctgcc accacgtccg gctaatttht tgtattttga gtagagacgg ggtttacca
2520
taatggtcag gctgttctca aactcctgat ctgaggtgat ccacccatct cggccttcca
2580
aagtgtggg attactggcg tgagccaccg caccggcct tgatgtttat tttataaagc
2640
actgtaattt tgtagctgat gacaaaaggc agccaaatgt ttttgataaa tcagtggcaa
2700
ctgtatttht gtcttttgaa ataactctga aaacatcagg acaacataga tttcaacctg
2760
atagcacacc acacacagtg agctgttgc ttttaaattc tgaagccttg tcaggtttgc
2820
ttcctagatt tcaagtgtt aaaataattc tatctatgaa actgaaggat gaagcagatc
2880
tctgactgac atgtaaaaaa aaaatgcct ttgaggtgt atggtggaga taaatgtttc
2940
tgaattcagt aaaattgatt cctaagtata ttatccta atctgtttgc acagttggta
3000
taaaaaggca tgaaatatgt attcaatacc tcttatgtaa ccaaaacat ttttaattag
3060
cttttaagga ctgagagagc atcatgttca actggcatgc agtctgcctg cattgccaat
3120
gaagtctca actgtttaat attttgaact aatattatth ataacttatg aatttaattc
3180
tttttgaaag actttaataa tttgagtctc tgagaggata ctttcaattt ccatggggga
3240
cttatttgtt ggggatctta aataagattc cttttgatct accggaatat acatgtacag
3300
agtacattgg atcatgttgg aaagaaggca agtgaaaagg tcagagatga agtagcgaag
3360
ttatggaata tcgtggaaag gatactagtt gtgaaatgga aagagacaag ttatagtacc
3420

ccaaaagcaa aacaagcagg agatgcaaga gatgccccaa aaggacaaag caacaatttt
3480
ctgttgccac ctttataccg gaagactctg ttgtagaaga aaagaaggct ttggtgcacc
3540
ttatgtggga ggaggagggg cagggcatgc tgatgctgag cgtacaggca gacaagagcg
3600
tagcctgctg ttgcctccat cactatgaaa tgacttattt tacctgaagg acccatgggt
3660
tatgttcctc taattccttt cactctccct aagccctctg agagagatga agatagatga
3720
ttttattgct actaaattga agggagcact atttcttttt gtcttttggt agcaaaaaat
3780
tgcaaaaaga attgtacatt cttgctaaaa ataaataaat aaataaaaaa ttaaaaaaac
3840
aagggaccta acaaaactca gcagtgttac tgtatttttt aaaaatattt ttatagactc
3900
attttcagggt tattaatgt aagagaaaca gataccctc ttttttaaag taggtaaatc
3960
attgatgatt tatattacca attttttagaa gtaattttct agtaagcttg tggcatcaga
4020
aaatactaga agattttttt agttaaatta gttagaacat ttatgaatga atataataaa
4080
tattttttca gaataaaata tggacccttt gtgtttacta atagataaag ccagatataa
4140
ttttttggtt ttaaggccac aaaatatggc ctttggttaa gaacactaaa gttagaaatc
4200
taaagttaga gcaacttttt aatggctatt tcctattatt gtaagtgtta aaaccctgc
4260
agaattcttg ataagggtgt atttatacta tatttcttat tataagataa ctgtctttag
4320
tcttcttagt actagtcttt ttagtactaa atcaatcagc aaacatcatc atttcacccc
4380
aaaattttgt cacagaaaag gcgtatcaaa tgaaaaataa tttcagagat ctttctttca
4440
agatattttt tcttgataaa atacattgtc ttgaagtaaa tacattgtca aaacctaat
4500
gcaattctgt taaatctaag taatttttag acagtgtttc accgtattat ttaggatgtg
4560
aaatgccatt tctttcactg attacaccat atacaggaaa caggtaaaac agtgaaaact
4620
ttattgtgct ggttgatgcc aacttggttg aaaagctctc tgcagaagaa gtgatctaga
4680
ctgacagaag tgttgctaata tacaagttgt gttctcatga cgtaattaga aagtaacttc
4740
tcaaagtaca acttttatga aaaagataag ctgttaaaaa aaggaaatcg taggttaatt
4800
taattgggaa aatgggcaat tgacagagac cattttccta acacatatat gtgctagtag
4860
tttaactttt taaaatttta cttctacgtt ttgtaatata aaaatttcta ttttaagttt
4920
agaatgttat acgtaccgaa agtatgcagc caaatcgatc agatcaaacc attttacctg
4980
gagtttggtg ctggttttta cttctctgaa tctgtataag aaaaataaag acaattgaac
5040

ttccaaaaaa aaaaa
5055

<210> 3326
<211> 254
<212> PRT
<213> Homo sapiens

<400> 3326
Glu Lys Ile Thr Thr Trp Gln Asp Pro Arg Lys Ala Met Asn Gln Pro
1 5 10 15
Leu Asn His Met Asn Leu His Pro Ala Val Ser Ser Thr Pro Val Pro
20 25 30
Gln Arg Ser Met Ala Val Ser Gln Pro Asn Leu Val Met Asn His Gln
35 40 45
His Gln Gln Gln Met Ala Pro Ser Thr Leu Ser Gln Gln Asn Arg Pro
50 55 60
Thr Gln Asn Pro Pro Ala Gly Leu Met Ser Met Pro Asn Ala Leu Thr
65 70 75 80
Thr Gln Gln Gln Gln Gln Lys Leu Arg Leu Gln Arg Ile Gln Met
85 90 95
Glu Arg Glu Arg Ile Arg Met Arg Gln Glu Glu Leu Met Arg Gln Glu
100 105 110
Ala Ala Leu Cys Arg Gln Leu Pro Met Glu Ala Glu Thr Leu Ala Pro
115 120 125
Val Gln Ala Ala Val Asn Pro Pro Thr Met Thr Pro Asp Met Arg Ser
130 135 140
Ile Thr Asn Asn Ser Ser Asp Pro Phe Leu Asn Gly Gly Pro Tyr His
145 150 155 160
Ser Arg Glu Gln Ser Thr Asp Ser Gly Leu Gly Leu Gly Cys Tyr Ser
165 170 175
Val Pro Thr Thr Pro Glu Asp Phe Leu Ser Asn Val Asp Glu Met Asp
180 185 190
Thr Gly Glu Asn Ala Gly Gln Thr Pro Met Asn Ile Asn Pro Gln Gln
195 200 205
Thr Arg Phe Pro Asp Phe Leu Asp Cys Leu Pro Gly Thr Asn Val Asp
210 215 220
Leu Gly Thr Leu Glu Ser Glu Asp Leu Ile Pro Leu Phe Asn Asp Val
225 230 235 240
Glu Ser Ala Leu Asn Lys Ser Glu Pro Phe Leu Thr Trp Leu
245 250

<210> 3327
<211> 2263
<212> DNA
<213> Homo sapiens

<400> 3327
nacgcgtgcg gaaccttcaa catttccgag gcctgcctgc ctccttccac tgctggctgg
60
agctgcctgg agaacttcgg ggactgccgg ccacctgga ggagacagca ggggattcag
120
gcctcatcca ctgccaggcc caccagtttt atccctccat gtcccagcgg gagctcccag
180

tgcccatcta cgtcaccag ggtgaagccc agaggctgga caacacccat gctctttatg
240
tgatcctgta cgactgcgcc atggggccacc cggactgcag ccaactgcaa gcggccagca
300
gaggagccca ggtcctaccc ggacgaggaa ggcccgaac actggtctga ctcacgctac
360
gagcatgtca tgaagttgcg ccaggcagcc ctgaaatcag ctcgagacat gtgggctgat
420
tacatcctgt ttgtagatgc ggacaacctg atcctcaacc ctgacacact gagcctgctc
480
atcgctgaga acaagacggt ggtcgcccc atgctggatt cccgggctgc gtactccaac
540
ttctgggtg gaatgacttc ccagggctac tacaagcgca cacctgccta catccctatc
600
cgcaagcgag accgccgggg ctgctttgca gttcccatgg tgcactcgac ctctctgatc
660
gacctgcgga aggcggcgctc caggaacctg gccttctacc cacctcacc tgactacacc
720
tggtcctttg acgacatcat cgtctttgcc ttctcctgca agcaggcaga ggttcagatg
780
tatgtgtgca acaaggagga gtacggattc ttgccagtgc cattgcgcgc ccacagcacc
840
ctccaggatg aggcgcgagag cttcatgcat gtgcagctgg aggtcatggt gaagcaccgc
900
cccgcagagc cctcccgcct catctcggct cccaccaaga caccggacaa gatgggcttc
960
gacgaggtct tcatgatcaa cctgaggcgg cggcaggacc ggcgggagcg catgctgcgg
1020
gcgctgcagg cacaggagat cgagtgccgg ctggtggagg ccgtggacgg caaagccatg
1080
aacaccagcc aggtggaggc gctggggatc cagatgctgc ctggctaccg ggaccctac
1140
cacggccggc cctcaccaa gggtagctg ggctgcttc tgagccacta caacatctgg
1200
aaggaggtg tggaccgggg gctgcagaaa tcgcttggtg ttgaggatga cctgcgtttt
1260
gagatcttct tcaagagacg tctgatgaac ctcatgcggg atgtggagcg ggagggcctg
1320
gactgggacc tcatctatgt gggccggaag cggatgcagg tggagcacc cgagaaggct
1380
gtgcctcgcg tgaggaacct ggtggaggcc gactattcct actggaccct ggccctacgtg
1440
atctccctgc aaggcgccc caaactgctg gctgctgagc cgctctccaa gatgctgcct
1500
gtggacgagt tcctgcccgt catgttcgac aaacaccag tgtccgagta caaggccac
1560
ttctccctcc gcaacctgca tgccttctct gtggagccgc tgetcatcta cccacacac
1620
tacacaggag acgatggcta tgtgagtgc accgagactt cagtcgtatg gaacaatgag
1680
cacgtcaaga ccgactggga ccgcgccaag tcccagaaga tgcgggagca gcaggcactg
1740
agccgtgagg ccaagaactc ggacgtgctc cagtccccac tggacagtgc tgcccgggat
1800

gaactctgag gggtagcagc cagaaagcca aagcagccat cggtagggcca ggctccacgt
 1860gacatcaggg ccacctctgg accccttggc aggccacaga gggctctcgt 1920
 gtggggtggt gtccagccag ctcttgctaa gcaatcacgt gcacacaggc agcattaatg
 1980
 gattgcctac tgcattgccag caacaggggt tggccctggg gaattgggag gaaccaagcc
 2040
 ctcttcattct gttcatgtgc ccagcattta ttaagcacct gctgtatgca aggttcccat
 2100
 gttacggcag tgaatgaggc ataattgttc cctccatcag cgattgattc agtcatcaag
 2160
 cagttactga tcagattaag aatcagggcac tagtgatata cattcatttt taaaattcat
 2220
 tcaaggaaaa aaaaaaaaaa aaaaaaaagc gcggccgcaa gct
 2263

<210> 3328

<211> 521

<212> PRT

<213> Homo sapiens

<400> 3328

Ser	Cys	Thr	Thr	Ala	Pro	Trp	Ala	Thr	Arg	Thr	Ala	Ala	Thr	Ala	Lys
1				5					10					15	
Arg	Pro	Ala	Glu	Glu	Pro	Arg	Ser	Tyr	Pro	Asp	Glu	Glu	Gly	Pro	Lys
			20					25					30		
His	Trp	Ser	Asp	Ser	Arg	Tyr	Glu	His	Val	Met	Lys	Leu	Arg	Gln	Ala
		35					40					45			
Ala	Leu	Lys	Ser	Ala	Arg	Asp	Met	Trp	Ala	Asp	Tyr	Ile	Leu	Phe	Val
	50					55					60				
Asp	Ala	Asp	Asn	Leu	Ile	Leu	Asn	Pro	Asp	Thr	Leu	Ser	Leu	Leu	Ile
65				70						75				80	
Ala	Glu	Asn	Lys	Thr	Val	Val	Ala	Pro	Met	Leu	Asp	Ser	Arg	Ala	Ala
			85						90					95	
Tyr	Ser	Asn	Phe	Trp	Cys	Gly	Met	Thr	Ser	Gln	Gly	Tyr	Tyr	Lys	Arg
		100						105					110		
Thr	Pro	Ala	Tyr	Ile	Pro	Ile	Arg	Lys	Arg	Asp	Arg	Arg	Gly	Cys	Phe
		115					120						125		
Ala	Val	Pro	Met	Val	His	Ser	Thr	Phe	Leu	Ile	Asp	Leu	Arg	Lys	Ala
		130				135					140				
Ala	Ser	Arg	Asn	Leu	Ala	Phe	Tyr	Pro	Pro	His	Pro	Asp	Tyr	Thr	Trp
145				150						155				160	
Ser	Phe	Asp	Asp	Ile	Ile	Val	Phe	Ala	Phe	Ser	Cys	Lys	Gln	Ala	Glu
			165						170					175	
Val	Gln	Met	Tyr	Val	Cys	Asn	Lys	Glu	Glu	Tyr	Gly	Phe	Leu	Pro	Val
		180						185					190		
Pro	Leu	Arg	Ala	His	Ser	Thr	Leu	Gln	Asp	Glu	Ala	Glu	Ser	Phe	Met
		195				200						205			
His	Val	Gln	Leu	Glu	Val	Met	Val	Lys	His	Pro	Pro	Ala	Glu	Pro	Ser
	210					215						220			
Arg	Phe	Ile	Ser	Ala	Pro	Thr	Lys	Thr	Pro	Asp	Lys	Met	Gly	Phe	Asp
225				230						235				240	
Glu	Val	Phe	Met	Ile	Asn	Leu	Arg	Arg	Arg	Gln	Asp	Arg	Arg	Glu	Arg
			245						250					255	
Met	Leu	Arg	Ala	Leu	Gln	Ala	Gln	Glu	Ile	Glu	Cys	Arg	Leu	Val	Glu

260 265 270
 Ala Val Asp Gly Lys Ala Met Asn Thr Ser Gln Val Glu Ala Leu Gly
 275 280 285
 Ile Gln Met Leu Pro Gly Tyr Arg Asp Pro Tyr His Gly Arg Pro Leu
 290 295 300
 Thr Lys Gly Glu Leu Gly Cys Phe Leu Ser His Tyr Asn Ile Trp Lys
 305 310 315 320
 Glu Val Val Asp Arg Gly Leu Gln Lys Ser Leu Val Phe Glu Asp Asp
 325 330 335
 Leu Arg Phe Glu Ile Phe Phe Lys Arg Arg Leu Met Asn Leu Met Arg
 340 345 350
 Asp Val Glu Arg Glu Gly Leu Asp Trp Asp Leu Ile Tyr Val Gly Arg
 355 360 365
 Lys Arg Met Gln Val Glu His Pro Glu Lys Ala Val Pro Arg Val Arg
 370 375 380
 Asn Leu Val Glu Ala Asp Tyr Ser Tyr Trp Thr Leu Ala Tyr Val Ile
 385 390 395 400
 Ser Leu Gln Gly Ala Arg Lys Leu Leu Ala Ala Glu Pro Leu Ser Lys
 405 410 415
 Met Leu Pro Val Asp Glu Phe Leu Pro Val Met Phe Asp Lys His Pro
 420 425 430
 Val Ser Glu Tyr Lys Ala His Phe Ser Leu Arg Asn Leu His Ala Phe
 435 440 445
 Ser Val Glu Pro Leu Leu Ile Tyr Pro Thr His Tyr Thr Gly Asp Asp
 450 455 460
 Gly Tyr Val Ser Asp Thr Glu Thr Ser Val Val Trp Asn Asn Glu His
 465 470 475 480
 Val Lys Thr Asp Trp Asp Arg Ala Lys Ser Gln Lys Met Arg Glu Gln
 485 490 495
 Gln Ala Leu Ser Arg Glu Ala Lys Asn Ser Asp Val Leu Gln Ser Pro
 500 505 510
 Leu Asp Ser Ala Ala Arg Asp Glu Leu
 515 520

<210> 3329

<211> 705

<212> DNA

<213> Homo sapiens

<400> 3329

ngtgcacgcg tgggtggcaga gcctggcctg gacgtgcctg agggcgctgc cctgaacctc
 60
 agctgcccgc tccctgggtgg ccctgggcct gtgggcaact ccacctttgc atggttctgg
 120
 aatgaccggc ggctgcacgc ggagcctgtg cccactctcg ccttcaccca cgtggctcgt
 180
 gctcaagctg ggatgtacca ctgcctggct gagctcccca ctggggctgc tgcctctgct
 240
 ccagtcatgc tccgtgtgct ctaccctccc aagacgcca ccatgatggt cttcgtggag
 300
 cctgaggggtg gcctccgggg catcctggat tgccgagtg acagcgagcc gctcgccagc
 360
 ctgactctcc accttggcag tcgactgggtg gcctccagtc agccccaggg tgctcctgca
 420

gagccacaca tccatgtcct ggcttcccc aatgcctga gggaggacat cgaggcgctg
 480
 agggccagcg accaagggga atacatctgt tctgcctcaa atgtcctggg ctctgcctct
 540
 acctccacct actttggggg cagagccctg caccgcctgc atcagttcca gcagctgctc
 600
 tgggtcctgg gactgctggg gggcctcctg ctctgctgt tgggcctggg ggctgctac
 660
 acctggagaa ggaggcgtgt ttgtaagcag agcatgggagc agaat
 705

<210> 3330
 <211> 235
 <212> PRT
 <213> Homo sapiens

<400> 3330
 Xaa Ala Arg Val Val Ala Glu Pro Gly Leu Asp Val Pro Glu Gly Ala
 1 5 10 15
 Ala Leu Asn Leu Ser Cys Arg Leu Leu Gly Gly Pro Gly Pro Val Gly
 20 25 30
 Asn Ser Thr Phe Ala Trp Phe Trp Asn Asp Arg Arg Leu His Ala Glu
 35 40 45
 Pro Val Pro Thr Leu Ala Phe Thr His Val Ala Arg Ala Gln Ala Gly
 50 55 60
 Met Tyr His Cys Leu Ala Glu Leu Pro Thr Gly Ala Ala Ala Ser Ala
 65 70 75 80
 Pro Val Met Leu Arg Val Leu Tyr Pro Pro Lys Thr Pro Thr Met Met
 85 90 95
 Val Phe Val Glu Pro Glu Gly Gly Leu Arg Gly Ile Leu Asp Cys Arg
 100 105 110
 Val Asp Ser Glu Pro Leu Ala Ser Leu Thr Leu His Leu Gly Ser Arg
 115 120 125
 Leu Val Ala Ser Ser Gln Pro Gln Gly Ala Pro Ala Glu Pro His Ile
 130 135 140
 His Val Leu Ala Ser Pro Asn Ala Leu Arg Val Asp Ile Glu Ala Leu
 145 150 155 160
 Arg Pro Ser Asp Gln Gly Glu Tyr Ile Cys Ser Ala Ser Asn Val Leu
 165 170 175
 Gly Ser Ala Ser Thr Ser Thr Tyr Phe Gly Val Arg Ala Leu His Arg
 180 185 190
 Leu His Gln Phe Gln Gln Leu Leu Trp Val Leu Gly Leu Leu Val Gly
 195 200 205
 Leu Leu Leu Leu Leu Leu Gly Leu Gly Ala Cys Tyr Thr Trp Arg Arg
 210 215 220
 Arg Arg Val Cys Lys Gln Ser Met Gly Glu Asn
 225 230 235

<210> 3331
 <211> 1644
 <212> DNA
 <213> Homo sapiens

<400> 3331

nnngaaaacgc gctggctgac tggggtcggc gtttagttca gcgcagcgac tcggggacct
60
ggagctgacg cctagacact tgtattagct ttaatagaag agaaatggag gagccataga
120
atattaagga tgaattcagg aaggcctgag accatggaaa acttgccctgc tctctacact
180
atthttccaag gagaggttgc tatggtgaca gactatgggg cctttatcaa aatcccaggc
240
tgtcgggaagc aaggtctggg ccatcgaact catatgtcat cctgtcgggt ggataagccc
300
tctgagatag tagatgttgg agataaagtg tgggtgaagc ttattggccg agagatgaaa
360
aatgatagaa taaaagtatc cctctccatg aaggttgtca atcaagggac tgggaaagac
420
cttgatccca acaatgtttc attgagcaag aagagaggcg gaggcgatcc ttccaggatt
480
acactgggca gaagatcacc cttgaggctg tcttgaacac tacctgcaag aagtgtggct
540
gtaaaggcca ctttgcaaaa gattgtttca tgcaaccagg tgggactaaa tactctctga
600
tacctgatga ggaagaggaa aaggaagagg caaagtcagc agagtttgag aagcctgacc
660
ctacaaggaa tccttctaga aaaagaaaga aggagaagaa gaaaaagaaa catagagata
720
ggaagtcacg tgactctgac agctcagact ctgagagtga tacaggcaag agggcaaggc
780
acacatcaaa agacagcaag gcagcaaaga agaagaaaaa gaagaagaag cacaagaaga
840
agcacaagga gtgagagtat aaagagtgtg gggggtgggt gagagtaaga aaccaggagc
900
ctcgtgcctt gagactcctg gaaagactca atagtgagaa tatagcctcc caccctatta
960
acttcgctcc catgggagat ggcttccct catgcaacag gcaggtttgg gagttagagg
1020
tcaaaagcag ctgcctgaat gattgttgtt ttccttatca ctctgggtcc ctttgcaagt
1080
gaaccttgca gtcacccat tcattcacce aacttccttc attcagcagg aggccctatt
1140
accctctcca gctgccactg ccagagctgg attcctgtaa aggagtccag gctagagcca
1200
cagagactgt tgtggaggtg agttcggctg tagttagagt gattggaccc ttcctattgg
1260
tctgtcctgg gccaaactgg ggggtgatct tgctgcatcc aacatgggag cagagactgg
1320
cagcaggagg ggggaacatg gtgagaagtg gtgctcactt tccccattcc tcctaacata
1380
gttctactat gctagaagtg gcatccagcg gccacagcta gaaaacagtc tgcagtgtga
1440
cttaacttgt gtattgcatt ccagcagacc actgaaccag acagcgaagc caagatcatt
1500
gttctacttt gtatttacta ctgtgtgaat cagttgattc tacttcagggt ccttgcttaa
1560
attcctgtca ctaaatggaa .atgtgtttgg ttttaaaaaa aaaaaaaaaa aaaaaaaaaa
1620

aaaaaaaaaa aaaaaaaaaa aaaa
1644

<210> 3332
<211> 128
<212> PRT
<213> Homo sapiens

<400> 3332
Met Asn Ser Gly Arg Pro Glu Thr Met Glu Asn Leu Pro Ala Leu Tyr
1 5 10 15
Thr Ile Phe Gln Gly Glu Val Ala Met Val Thr Asp Tyr Gly Ala Phe
20 25 30
Ile Lys Ile Pro Gly Cys Arg Lys Gln Gly Leu Val His Arg Thr His
35 40 45
Met Ser Ser Cys Arg Val Asp Lys Pro Ser Glu Ile Val Asp Val Gly
50 55 60
Asp Lys Val Trp Val Lys Leu Ile Gly Arg Glu Met Lys Asn Asp Arg
65 70 75 80
Ile Lys Val Ser Leu Ser Met Lys Val Val Asn Gln Gly Thr Gly Lys
85 90 95
Asp Leu Asp Pro Asn Asn Val Ser Leu Ser Lys Lys Arg Gly Gly Gly
100 105 110
Asp Pro Ser Arg Ile Thr Leu Gly Arg Arg Ser Pro Leu Arg Leu Ser
115 120 125

<210> 3333
<211> 2422
<212> DNA
<213> Homo sapiens

<400> 3333
ctcgagtttg accagcagca ggggtcgggtg tgtccctctg aatctgagat ctatgaggca
60
ggagctgggg acaggatggc aggagcgccc atggctgctg ctgtacagcc tgctgaggtg
120
actgttgaag ttggtgagga cctccacatg caccacgttc gtgaccggga gatgcctgaa
180
gctttggagt ttaacctttc tgccaatcca gagtcaagca caatattcca gaggaactct
240
caaacagaag ctttggagtt taacccttct gccaatccag aggcaagcac aatattccag
300
aggaactctc aaacagatgt tgtagaaata agaagaagca actgtacaaa ccatgtatct
360
gctgtgcgtt tcagtcaaca atacagcttg tgttcgacaa tattccttga tgacagcaca
420
gccatccagc attatcttac aatgacaata atatctgtga ccttggagat acctcatcat
480
atcacacaaa gagatgcaga tagaactttg agcatacctg atgaacagtt acactcattt
540
gcggtttcca cgtgcacat tatgaagaaa agaaatggag gtgggagttt aaataactat
600
tcctcctcca ttccatcgac tcccagcacc agccaggagg accctcagtt cagtgttcct
660

cccactgccac acacacccac ccccgtttgc aagcgggtcca tgcgctggtc caacctgttt
720
acatctgaga aagggagtca cccagacaaa gagaggaaag ccccgagaa tcatgctgac
780
accatcgga gcggcagagc catccccatt aaacagggca tgctcttaaa gcgaagtggg
840
aaatggctga agacatggaa aaagaaatac gtcaccctgt gttccaatgg catgctcacc
900
tattattcaa gcttaggtga ttatatgaag aatattcata aaaaagagat tgaccttcag
960
acatctacca tcaaagtccc aggaaagtgg ccacccctag ccacatcggc ctgcacaccc
1020
atctccagct ctaaaagcaa tggcctatcc aaggacatgg acaccgggct gggtgactcc
1080
atatgcttca gccccagtat ctccagcacc accagcccca agctcaaccc gccccctct
1140
cctcatgcta ataaaaagaa acacctaaag aagaaaagca ccaacaactt tatgattgtg
1200
tctgccactg gccaaacgtg gcactttgaa gccacgacgt atgaggagcg ggatgcctgg
1260
gtccaagcca tccagagcca gatcctggcc agcctgcagt catgagagag cagtaaaagc
1320
aagtcccagc tgaccagcca aagcgaggcc atggccctgc agtcgatcca aaacatgcgt
1380
gggaacgccc actgtgtgga ctgtgagacc cagaatccta agtgggcccag tttgaacttg
1440
ggagtccctca tgtgtattga atgctcaggt atccaccgca gtcttgccac ccgcctttcc
1500
cgtgtgcgat ctctggagct ggatgactgg ccagttgagc tcaggaagggt tatgtcatct
1560
attggcaatg agctagccaa cagcatctgg gaagagagca gccaggggagc gacaaaacca
1620
tcggtagact ccacaaggga agagaaggaa cgggtggatcc gttccaaata tgaggagaag
1680
ctctttctgg cccactacc ctgcactgag ctgtccctgg gccagcagct gctgcgggccc
1740
accgctgatg aggacctgca gacagccatc ctgctgctgg cacatggctc ccgtgaggag
1800
gtgaacgaga cctgtgggga gggagacggc tgcacggcgc tccatctggc ctgccgcaag
1860
gggaatgtgg tccctggcgca gctcctgac tggtagggg tggacgtcat ggcccagat
1920
gccacggga acacagcgct gacctacgc cggcaggcct ccagccagga gtgcatcaac
1980
gtgcttctgc agtacggctg ccccgacaag tgtgtgtagt atctgtttta tttgactgca
2040
gtctccttgg tgcaaaaaca aaatgggaaa aataaggata actcagaatt tcaaaaggaa
2100
atcaciaaatt cagctagtaa tagcattttc agtacttttc gtaaaactaag taaatacaca
2160
aaatgttgat ttttctgacc ataagacgta ttttatgtcc ttttgccaag gtggatttgt
2220
tagtctcagg cctcctggc cacattgccc aagtcacaca ggcttctgta ttatgtattt
2280

agataaaatg tgtgaaaaca tatttgaaat aaagttcata aatatgcaaa aaaaaaaaaa
 2340
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaagaaa
 2400
 aaaaaaaggg aaaaaaaaaa ag
 2422

<210> 3334
 <211> 672
 <212> PRT
 <213> Homo sapiens

<400> 3334
 Leu Glu Phe Asp Gln Gln Gln Gly Ser Val Cys Pro Ser Glu Ser Glu
 1 5 10 15
 Ile Tyr Glu Ala Gly Ala Gly Asp Arg Met Ala Gly Ala Pro Met Ala
 20 25 30
 Ala Ala Val Gln Pro Ala Glu Val Thr Val Glu Val Gly Glu Asp Leu
 35 40 45
 His Met His His Val Arg Asp Arg Glu Met Pro Glu Ala Leu Glu Phe
 50 55 60
 Asn Leu Ser Ala Asn Pro Glu Ser Ser Thr Ile Phe Gln Arg Asn Ser
 65 70 75 80
 Gln Thr Glu Ala Leu Glu Phe Asn Pro Ser Ala Asn Pro Glu Ala Ser
 85 90 95
 Thr Ile Phe Gln Arg Asn Ser Gln Thr Asp Val Val Glu Ile Arg Arg
 100 105 110
 Ser Asn Cys Thr Asn His Val Ser Ala Val Arg Phe Ser Gln Gln Tyr
 115 120 125
 Ser Leu Cys Ser Thr Ile Phe Leu Asp Asp Ser Thr Ala Ile Gln His
 130 135 140
 Tyr Leu Thr Met Thr Ile Ile Ser Val Thr Leu Glu Ile Pro His His
 145 150 155 160
 Ile Thr Gln Arg Asp Ala Asp Arg Thr Leu Ser Ile Pro Asp Glu Gln
 165 170 175
 Leu His Ser Phe Ala Val Ser Thr Val His Ile Met Lys Lys Arg Asn
 180 185 190
 Gly Gly Gly Ser Leu Asn Asn Tyr Ser Ser Ser Ile Pro Ser Thr Pro
 195 200 205
 Ser Thr Ser Gln Glu Asp Pro Gln Phe Ser Val Pro Pro Thr Ala Asn
 210 215 220
 Thr Pro Thr Pro Val Cys Lys Arg Ser Met Arg Trp Ser Asn Leu Phe
 225 230 235 240
 Thr Ser Glu Lys Gly Ser His Pro Asp Lys Glu Arg Lys Ala Pro Glu
 245 250 255
 Asn His Ala Asp Thr Ile Gly Ser Gly Arg Ala Ile Pro Ile Lys Gln
 260 265 270
 Gly Met Leu Leu Lys Arg Ser Gly Lys Trp Leu Lys Thr Trp Lys Lys
 275 280 285
 Lys Tyr Val Thr Leu Cys Ser Asn Gly Met Leu Thr Tyr Tyr Ser Ser
 290 295 300
 Leu Gly Asp Tyr Met Lys Asn Ile His Lys Lys Glu Ile Asp Leu Gln
 305 310 315 320
 Thr Ser Thr Ile Lys Val Pro Gly Lys Trp Pro Ser Leu Ala Thr Ser

```
<210> 3335
<211> 477
<212> DNA
<213> Homo sapiens
```

```
<400> 3335
nggatccatc acgcgttcag ggcagcggaa ttccggctcc ccagggggca gctcaggcag
60
ggcctcttca ggagtgcagt ccgggacctc ctccccaggg ccctgctcat gctgtctcgg
120
```

cccagactgc ttgttgaagg ggttgagggtg ggcctgccgg aaacgggcca gcttctcatc
180
atattccata gcatcccacc tgcctgcct gccagggccc aggggctcgc agggacagga
240
tgccattcc tctagggctg ctggccacgg aagcctggcc gtgggttcgg cacctgctga
300
ccgccgctc gcatttgccc tgagacaggg ctggacagcc aggattaccg ctgtgccgag
360
tgccgggccc ccattctctt gcgggggtgtg cccagtggag ccaggcagtg cgactacacc
420
ggccagtact actgcagccc ctgccactgg aacgccctgg ctgtgatccc tgcacgc
477

<210> 3336

<211> 59

<212> PRT

<213> Homo sapiens

<400> 3336

Pro	Pro	Pro	Arg	Ile	Cys	Pro	Glu	Thr	Gly	Leu	Asp	Ser	Gln	Asp	Tyr
1				5					10					15	
Arg	Cys	Ala	Glu	Cys	Arg	Ala	Pro	Ile	Ser	Leu	Arg	Gly	Val	Pro	Ser
		20						25					30		
Glu	Ala	Arg	Gln	Cys	Asp	Tyr	Thr	Gly	Gln	Tyr	Tyr	Cys	Ser	Pro	Cys
		35					40					45			
His	Trp	Asn	Ala	Leu	Ala	Val	Ile	Pro	Ala	Arg					
	50						55								

<210> 3337

<211> 679

<212> DNA

<213> Homo sapiens

<400> 3337

nagatcttcc tcttgaatga tttgggcagc gagctctgta tgaagaagaa aaaggggaaa
60
aaaaagagaa agagagacac cccacagaga ggggggaagg aggttagatg gggcagtctt
120
agcttagcct ccaaagacac agatagagtg agagagagag acagagagag acacagagac
180
agacagagac caaaacagaa gcggcaaacg gcaaaaacga agcagaatca atgcaagtta
240
gagaaaaaaa taaaactaaa catcagagca gggaaaagtc atctactccg tatcacacct
300
gtgtattagc ttaaccagaa ataagctgga agaggagtgc agtagcctct cagcccccta
360
aagatgttgg tcataccccc tctttcaccg tctgagtcga gaggacacca agccaaacaa
420
actgtgcccc aaactgggtc atctagtcct cccaggtcct tccttgctaa ctcgaggaaa
480
caaggaaaac caactttgga tggcaacttc aacaaggtaa ccctccttcc ttcaatggcc
540
agactgatgc ccactgacaa tggctttgag atgcttggac agcagactgt catgtcaaga
600

ctgcccagac ccccaccaca ctgtggaaaa gggcagcacc agaccactg gagatgaggg
 660
 tcttgagcca agtgctagc
 679

<210> 3338
 <211> 102
 <212> PRT
 <213> Homo sapiens

<400> 3338
 Xaa Ile Phe Leu Leu Asn Asp Leu Gly Ser Glu Leu Cys Met Lys Lys
 1 5 10 15
 Lys Lys Gly Lys Lys Lys Arg Lys Arg Asp Thr Pro Gln Arg Gly Gly
 20 25 30
 Lys Glu Val Arg Trp Gly Ser Leu Ser Leu Ala Ser Lys Asp Thr Asp
 35 40 45
 Arg Val Arg Glu Arg Asp Arg Glu Arg His Arg Asp Arg Gln Arg Pro
 50 55 60
 Lys Gln Lys Arg Gln Thr Ala Lys Thr Lys Gln Asn Gln Cys Lys Leu
 65 70 75 80
 Glu Lys Lys Ile Lys Leu Asn Ile Arg Ala Gly Lys Ser His Leu Leu
 85 90 95
 Arg Ile Thr Pro Val Tyr
 100

<210> 3339
 <211> 1341
 <212> DNA
 <213> Homo sapiens

<400> 3339
 tttttttttt tttttcacca aaacaatttt tatttccagt gtttaattgg gtatgcacac
 60
 aggcatgaca caggtttgga ttcattaagt cctcatgcag aattatattc ttctcgataa
 120
 agaagccagt tccatccagg atccactatc tacacaccta tggtacaaca ttatatcaaa
 180
 tctggtatct gaagaaaaga tacacattta atatgttcat ttaagttacg tattttgcag
 240
 aaagattaaa aattcattca cacaaaactc aaaaactgta ttaaagttt gaatataaaa
 300
 ctcatatcca cctggaatga ctaaagaatg gaagttctgt atccacctgt gttaaaactg
 360
 gtaaatgtaa tgatatctgt taccaataaa acgcattcgt ttattcaatg taagtaagtt
 420
 atctaatttt aacaatatgg caccctaaaa accaactgta tttttatgat gaggcacttt
 480
 tgtttagtgat gaaacaaaa gaacaaattt gctgcacact gatgccagcg attttcttca
 540
 gtgatttttg gtatatgcta tgtagtaagt tgcaacaaat accttgctca tttgtatata
 600
 actatccgat atatttttaa tatatatata tatatatggt cttctggctg tagtaatgca
 660

ctgtaaagct atttcacagt gcaaaatgat gaaaccagcc caaatgaagg ctgcataata
 720
 acaattctga tacaagaaaa tattgacaga gttactggaa cgtgtaacag tagttttttt
 780
 acttgctaga gtggacatac cccagttta aagacagggga tgaaactctg ctttagtgcc
 840
 tgggggtttca gacagtttat gaggttgggc attcgctgca gaactagcat ttttgctcac
 900
 gttctggaag ctttctccgt ttatttggtc aggtgactgt ggtggatatgg aaagaagggg
 960
 cctgtttggt gaagccaagg tgctggaaga actgcctgtg ttgcaatgaa gagacaaagg
 1020
 tgtgtcggtc gtggctatatt ctctgtgtgt tgggttctct gtctggggat ctccgatttc
 1080
 tcctctgcta aggtcagagg tactgggtgcg taggcgttcc ctggccagcc agtctgagat
 1140
 ggaaagggtcc tgggctgagc attttgggtt taaccgggtt acagctgaaa gttcagattc
 1200
 tctctccccg ctctgctcat gcactttcca aaaattcaaa acgctgattt cagtagcatc
 1260
 tctgtgccct cctagtgtat gtctgcgccg gatgcttttc cttttagcag tctcggcatt
 1320
 cactttgtga ttccctactc c
 1341

<210> 3340

<211> 86

<212> PRT

<213> Homo sapiens

<400> 3340

Met	Ser	Thr	Leu	Ala	Ser	Lys	Lys	Thr	Thr	Val	Thr	Arg	Ser	Ser	Asn
1				5				10					15		
Ser	Val	Asn	Ile	Phe	Leu	Tyr	Gln	Asn	Cys	Tyr	Tyr	Ala	Ala	Phe	Ile
		20					25					30			
Trp	Ala	Gly	Phe	Ile	Ile	Leu	His	Cys	Glu	Ile	Ala	Leu	Gln	Cys	Ile
		35				40					45				
Thr	Thr	Ala	Arg	Arg	Thr	Tyr	Ile	Tyr	Ile	Tyr	Ile	Lys	Asn	Ile	Ser
	50				55					60					
Asp	Ser	Cys	Ile	Gln	Met	Ser	Lys	Val	Phe	Val	Ala	Thr	Tyr	Tyr	Ile
65				70				75						80	
Ala	Tyr	Thr	Gln	Asn	His										
				85											

<210> 3341

<211> 1132

<212> DNA

<213> Homo sapiens

<400> 3341

ttttacagca caatatatgt gctctgctct cctccccgcaa tcctgctcca agagatctta
 60
 agctggaggc accaggctctg aattccagac tcctccccac caccacact tcacctccaa
 120

ctggagcatg accacagacc cattcagga ggctggcgga ctcttcatcc tggacagtcc
 180
 cttactgtat gtcaagtaaa gctgagaatg aagcggagag catcagacag aggagctggg
 240
 gaaacgtcgg ccagggccaa ggctctagga agtgggattt ctggaaataa tgcaaagaga
 300
 gctggaccat tcatecttgg tccccgtctg ggcaactcac cggtgccaaag catagtgcag
 360
 tgtttggcga ggaaagatgg cacggatgac ttctatcagc tgaagatcct gaccctggag
 420
 gagagggggg accaaggcat agagagccag gaagagcggc agggcaagat gctgctgcac
 480
 accgagtact cactgctgtc tctcctgcac acgcaggatg gcgtggtgca ccaccacggc
 540
 ctcttccagg accgcacctg tgaaatcggt gaggacacag aatccagccg gatggttaag
 600
 aagatgaaga agcgcactcg cctcgtcctg gactgcctct gtgctcatga cttcagcgat
 660
 aagaccgctg acctcatcaa cctgcagcac tacgtcatca aggagaagag gctcagcgag
 720
 agggagactg tggtaatctt ctacgacgtg gtccgcgtgg tggaggccct gcaccagaaa
 780
 aatatcgtgc acagagacct gaagctgggg aacatggtgc tcaacaagag gacacatcgg
 840
 ataaccatca ccaacttctg cctcgggaag catctggtga gcgaggggga cctgctgaag
 900
 gaccagagag ggagccctgc ctacatcagt cccgacgtgc tcagcggccg gccgtaccgt
 960
 ggcaagccca gtgacatgtg ggccctgggc gtggtgctct tcaccatgct gtatggccag
 1020
 ttcccccttct acgacagcat cccgcaggag ctcttccgca agatcaaggc tgccgagtat
 1080
 accattcctg aggatggacg ggtttctgag aacaccgtgt gtctcatccg ga
 1132

<210> 3342

<211> 308

<212> PRT

<213> Homo sapiens

<400> 3342

Met	Lys	Arg	Arg	Ala	Ser	Asp	Arg	Gly	Ala	Gly	Glu	Thr	Ser	Ala	Arg
1				5				10						15	
Ala	Lys	Ala	Leu	Gly	Ser	Gly	Ile	Ser	Gly	Asn	Asn	Ala	Lys	Arg	Ala
		20						25					30		
Gly	Pro	Phe	Ile	Leu	Gly	Pro	Arg	Leu	Gly	Asn	Ser	Pro	Val	Pro	Ser
		35				40						45			
Ile	Val	Gln	Cys	Leu	Ala	Arg	Lys	Asp	Gly	Thr	Asp	Phe	Tyr	Gln	
	50					55				60					
Leu	Lys	Ile	Leu	Thr	Leu	Glu	Glu	Arg	Gly	Asp	Gln	Gly	Ile	Glu	Ser
65				70					75					80	
Gln	Glu	Glu	Arg	Gln	Gly	Lys	Met	Leu	Leu	His	Thr	Glu	Tyr	Ser	Leu
			85					90						95	
Leu	Ser	Leu	Leu	His	Thr	Gln	Asp	Gly	Val	Val	His	His	His	Gly	Leu

```

          100          105          110
Phe Gln Asp Arg Thr Cys Glu Ile Val Glu Asp Thr Glu Ser Ser Arg
          115          120          125
Met Val Lys Lys Met Lys Lys Arg Ile Cys Leu Val Leu Asp Cys Leu
          130          135          140
Cys Ala His Asp Phe Ser Asp Lys Thr Ala Asp Leu Ile Asn Leu Gln
145          150          155          160
His Tyr Val Ile Lys Glu Lys Arg Leu Ser Glu Arg Glu Thr Val Val
          165          170          175
Ile Phe Tyr Asp Val Val Arg Val Val Glu Ala Leu His Gln Lys Asn
          180          185          190
Ile Val His Arg Asp Leu Lys Leu Gly Asn Met Val Leu Asn Lys Arg
          195          200          205
Thr His Arg Ile Thr Ile Thr Asn Phe Cys Leu Gly Lys His Leu Val
          210          215          220
Ser Glu Gly Asp Leu Leu Lys Asp Gln Arg Gly Ser Pro Ala Tyr Ile
225          230          235          240
Ser Pro Asp Val Leu Ser Gly Arg Pro Tyr Arg Gly Lys Pro Ser Asp
          245          250          255
Met Trp Ala Leu Gly Val Val Leu Phe Thr Met Leu Tyr Gly Gln Phe
          260          265          270
Pro Phe Tyr Asp Ser Ile Pro Gln Glu Leu Phe Arg Lys Ile Lys Ala
          275          280          285
Ala Glu Tyr Thr Ile Pro Glu Asp Gly Arg Val Ser Glu Asn Thr Val
          290          295          300
Cys Leu Ile Arg
305

```

<210> 3343
 <211> 594
 <212> DNA
 <213> Homo sapiens

```

<400> 3343
cgcgatcatga gccaccgcat ggaggggtgct ggccagctgc ccgcctccta ccggcacaac
60
cggcctctcc tcagcggcgt gaggtagacc gaggcgcgcc agccggggaa gtcgcccccc
120
ttcagcatga actgggtcgt gggcagcgcg gacctggaga ttatcaacgc caccactggg
180
cggaggagct gtggggggccc atcccggctc tgcaagcacg tgctgtctgc acggtgggcg
240
cggctgtatg gcaggctgag cacacggaca ccagccctg gagacacgcc ctccatgtac
300
tgtgaggcca agctgggggc gcacacctac cagtctgtga aacagcagct gttcaaggcc
360
tttcagaagg ctggcctggg cacctgggtg aggaaaccac cggagcagca gcagtttcta
420
ctgactctct aggctgcggg ctccctggctg ctggagctga gcgggacgct ggagggatgg
480
gaccgtgtct gggggggcag gtggcgggctc ggccgggtcc ctgcattcgt tttactttgg
540
tgtcccagaa acacgcgagt gtgcaatggt tggacgagca acaaaaaaaaa aaaa
594

```

<210> 3344
 <211> 143
 <212> PRT
 <213> Homo sapiens

<400> 3344
 Arg Val Met Ser His Arg Met Glu Gly Val Gly Gln Leu Pro Ala Ser
 1 5 10 15
 Tyr Arg His Asn Arg Pro Leu Leu Ser Gly Val Ser Asp Thr Glu Ala
 20 25 30
 Arg Gln Pro Gly Lys Ser Pro Pro Phe Ser Met Asn Trp Val Val Gly
 35 40 45
 Ser Ala Asp Leu Glu Ile Ile Asn Ala Thr Thr Gly Arg Arg Ser Cys
 50 55 60
 Gly Gly Pro Ser Arg Leu Cys Lys His Val Leu Ser Ala Arg Trp Ala
 65 70 75 80
 Arg Leu Tyr Gly Arg Leu Ser Thr Arg Thr Pro Ser Pro Gly Asp Thr
 85 90 95
 Pro Ser Met Tyr Cys Glu Ala Lys Leu Gly Ala His Thr Tyr Gln Ser
 100 105 110
 Val Lys Gln Gln Leu Phe Lys Ala Phe Gln Lys Ala Gly Leu Gly Thr
 115 120 125
 Trp Val Arg Lys Pro Pro Glu Gln Gln Gln Phe Leu Leu Thr Leu
 130 135 140

<210> 3345
 <211> 1149
 <212> DNA
 <213> Homo sapiens

<400> 3345
 ggatcccata ggtagctcta gggctggagc tctgcaacat tgggcaagag gaccctgtgc
 60
 tgggagggcag ggagcttggg cccctcagat gggccacgtg ccctcgtggg accctcattg
 120
 tcaccgtgag ctctttccaa ggggacgcca ccagtggggg cctgggcagg aggcagctga
 180
 ggtgtttcag gaaaaggctg aagatcaagg ctgtggtgtg aggactaccc actttaggga
 240
 agtgaaagag gccagcctca cccagacac ccagtggtg ttggggaaag ggggtggtcc
 300
 gtggtgagcc tggtacctgg ggactcatcc tggccctgcc tggccctcag gtgggatgct
 360
 atggaatatg atgagaagct ggcccgtttc cggcaggccc acctcaaccc cttcaacaag
 420
 cagtctgggc cgagacagca tgagcagggc cctggggagg aggtcccgga cgtcactcct
 480
 gaagaggccc tgcttgagct gccccctggg gagccggaat tccgctgccc tgaacgcgtg
 540
 atggatctcg gcctgtctga ggaccacttc tcccgcctg tgggtctggt cctggcctct
 600
 gacgtccagc agctgcggca ggcgatcgag gaggcaagc aggtgattct ggagctgccc
 660

gagcagtcgg agaagcagaa ggatgccgtg gtgcgactca tccacctccg gctgaagctc
 720
 caggagctga aggaccccaa tgaggatgag ccaaacatcc gagtgtcctc tgagcaccgc
 780
 ttttacaagg agaagagcaa gagcgtcaag cagacctgtg acaagtgtaa caccatcatc
 840
 tgggggctca ttcagacctg gtacacctgc acagggtgtt attacgctg tcacagtaag
 900
 tgcttgaacc tcatctccaa gccctgtgtg agctccaaag tcagccacca agctgaatac
 960
 gaactgaaca tctgccctga gacagggctg gacagccagg attacgctg tgccgagtgc
 1020
 cgggcgccca tctctctgcg ggggtgtgcc agtgaggcca ggcagtgcga ctataccggc
 1080
 cagtactact gcagccactg ccactggaac gacctggctg tgatcccaga ggctggagtg
 1140
 tgctcgcga
 1149

<210> 3346

<211> 263

<212> PRT

<213> Homo sapiens

<400> 3346

Met	Glu	Tyr	Asp	Glu	Lys	Leu	Ala	Arg	Phe	Arg	Gln	Ala	His	Leu	Asn
1				5				10					15		
Pro	Phe	Asn	Lys	Gln	Ser	Gly	Pro	Arg	Gln	His	Glu	Gln	Gly	Pro	Gly
		20						25				30			
Glu	Glu	Val	Pro	Asp	Val	Thr	Pro	Glu	Glu	Ala	Leu	Pro	Glu	Leu	Pro
		35					40				45				
Pro	Gly	Glu	Pro	Glu	Phe	Arg	Cys	Pro	Glu	Arg	Val	Met	Asp	Leu	Gly
	50				55					60					
Leu	Ser	Glu	Asp	His	Phe	Ser	Arg	Pro	Val	Gly	Leu	Phe	Leu	Ala	Ser
65				70					75					80	
Asp	Val	Gln	Gln	Leu	Arg	Gln	Ala	Ile	Glu	Glu	Cys	Lys	Gln	Val	Ile
			85					90					95		
Leu	Glu	Leu	Pro	Glu	Gln	Ser	Glu	Lys	Gln	Lys	Asp	Ala	Val	Val	Arg
		100						105					110		
Leu	Ile	His	Leu	Arg	Leu	Lys	Leu	Gln	Glu	Leu	Lys	Asp	Pro	Asn	Glu
	115						120					125			
Asp	Glu	Pro	Asn	Ile	Arg	Val	Leu	Leu	Glu	His	Arg	Phe	Tyr	Lys	Glu
	130					135					140				
Lys	Ser	Lys	Ser	Val	Lys	Gln	Thr	Cys	Asp	Lys	Cys	Asn	Thr	Ile	Ile
145				150					155					160	
Trp	Gly	Leu	Ile	Gln	Thr	Trp	Tyr	Thr	Cys	Thr	Gly	Cys	Tyr	Tyr	Arg
			165					170					175		
Cys	His	Ser	Lys	Cys	Leu	Asn	Leu	Ile	Ser	Lys	Pro	Cys	Val	Ser	Ser
		180					185						190		
Lys	Val	Ser	His	Gln	Ala	Glu	Tyr	Glu	Leu	Asn	Ile	Cys	Pro	Glu	Thr
	195					200						205			
Gly	Leu	Asp	Ser	Gln	Asp	Tyr	Arg	Cys	Ala	Glu	Cys	Arg	Ala	Pro	Ile
	210				215						220				
Ser	Leu	Arg	Gly	Val	Pro	Ser	Glu	Ala	Arg	Gln	Cys	Asp	Tyr	Thr	Gly

225		230		235		240
Gln Tyr Tyr Cys Ser His Cys His Trp Asn Asp Leu Ala Val Ile Pro						
		245		250		255
Glu Ala Gly Val Cys Ser Arg						
	260					

<210> 3347
 <211> 2267
 <212> DNA
 <213> Homo sapiens

<400> 3347
 aggtgtgtaa cgtgcgctat ggagccgaaa gtcgcagagc tgaagcagaa gatcgaggac
 60
 acgctatgtc cttttggctt cgaggtttac cccttcagg tggcatggta caatgaactc
 120
 ttgcctccag ccttccacct accgctgcc a ggacctacc tggccttcct ggtactcagc
 180
 acgcctgcc tgtttgaccg ggccctcaag cccttcttgc agagctgcc cctccgaatg
 240
 ctgactgacc cagtggacca gtgtgtggcc taccatctgg gccgtgttgg agagagcctc
 300
 ccagagctgc agatagaaat cattgctgac tacgaggtag accccaaccg acgccccaa
 360
 atcctggccc agacagcagc ccatgtagct ggggctgctt actactacca acgacaagat
 420
 gtggaggctg acccatgggg gaaccagcgc atatcagggtg tgtgcataca ccccgattt
 480
 ggggggctggt ttgccatccg aggggtagtg ctgctgccag ggatagaggt gccagatctg
 540
 ccaccagaa aacctcatga ctgtgtacct acaagagctg accgtatcgc cctactcgaa
 600
 ggcttcaatt tccactggcg tgattggact taccgggatg ctgtgacacc ccaggagcgc
 660
 tactcagaag agcagaaggc ctacttctcc actccacctg cccaacgatt ggccctattg
 720
 ggcttggctc agccctcaga gaagcctagt tctccctccc cggaccttcc ctttaccaca
 780
 cccgccccca agaagcctgg gaatcccagc agagcccga gctggctcag cccaggggc
 840
 tcaccacctg catcccctgg cccttgattt tctcccatgt ggacctgat ttatggtggt
 900
 acttgctagg acttaattgg ctttggcaaa gcaaaagggt ttgagtacaa gattactatt
 960
 tttgataata tagtagagat cttccatgaa gataacaagg ctcaaggaag ttaggtttgg
 1020
 ccaagataaa ggccaggga ccagaattcc catctgcctt caaatgagtt tttttttttt
 1080
 ttttttttta gacagagtct tactctgtca cctaggctgg agtgcagtgg cacagtctct
 1140
 actcactgca acctctgcct cctgggctga ggcagtagaa tcatttgaac cagggaggca
 1200
 gagattgcag tgagccgaga ttgcatggct gcactctagc ctgggtgaca gtgtgagact
 1260

ctgtctcaaa agaaaaaaaa gtacctgcct caggtaggga ctgaataaac acgtgtaagg
 1320
 cactttggaa aaatacctgg catatatagt aagcagtatg ttggccatta cgaaaggccc
 1380
 tgggaattct gtactgctgc tcatgggtgt agtcggttct agaggggtgg gcagggtggga
 1440
 gtagctgagg aagacaagtg gctggaatgg tatcacatga tacacagaag taccctcagt
 1500
 tctgaatcta ccttggcctc aaggggcccag gagaataact tttcccagct gacagcctct
 1560
 ctgaggacaa tgacatatga atgaggatca aaacgagctt tggccaggca ctgtggcgct
 1620
 cacctgtaat cccaccattt tgggaggctg aggcggagga ccacctgagg caaggaattc
 1680
 agaaccactc tgggcaacat aatgacacta aaaaagacta tctctaatca aggctagaac
 1740
 caagggaagg ctaagaattg ccagtgactg tgcaactact gaaagcccta cccaaggcca
 1800
 ccagccttgt ctctctcttt cctctgtcag ttcaaaaaga acagaaacct ccagctcttt
 1860
 tacatagcag gtaccaggca tttatcagaa gaggccaaagc ttctgggtcc catgcagccc
 1920
 tttgaatagt gtgtctaaac aaaaataggt gtccaagtag tcacactgag actttaactg
 1980
 gtaaccacc ctgtggcgct agtcgcagtg ctctggccaa cactatagca gggcttattc
 2040
 ttctccctca tgtgtagtga aacaaaatgt aacaccttgg gttcattcag ttccattccc
 2100
 tatgtctacc tgtgtcaata taattccctg atttggaggg agctctctctc attttcccca
 2160
 aaacagggaa agcaaggagt aaattcctct taaaatcaaa agctaataat atgcttccta
 2220
 aaataaagac tcatcaaggt ctcaaaaaaa aaaaaaaaaa aaaaatt
 2267
 <210> 3348
 <211> 288
 <212> PRT
 <213> Homo sapiens

<400> 3348

Arg	Cys	Val	Thr	Cys	Ala	Met	Glu	Pro	Lys	Val	Ala	Glu	Leu	Lys	Gln
1				5					10					15	
Lys	Ile	Glu	Asp	Thr	Leu	Cys	Pro	Phe	Gly	Phe	Glu	Val	Tyr	Pro	Phe
			20					25					30		
Gln	Val	Ala	Trp	Tyr	Asn	Glu	Leu	Leu	Pro	Pro	Ala	Phe	His	Leu	Pro
		35					40				45				
Leu	Pro	Gly	Pro	Thr	Leu	Ala	Phe	Leu	Val	Leu	Ser	Thr	Pro	Ala	Met
	50					55					60				
Phe	Asp	Arg	Ala	Leu	Lys	Pro	Phe	Leu	Gln	Ser	Cys	His	Leu	Arg	Met
65					70					75				80	
Leu	Thr	Asp	Pro	Val	Asp	Gln	Cys	Val	Ala	Tyr	His	Leu	Gly	Arg	Val
				85					90					95	
Gly	Glu	Ser	Leu	Pro	Glu	Leu	Gln	Ile	Glu	Ile	Ile	Ala	Asp	Tyr	Glu
			100					105						110	

Val His Pro Asn Arg Arg Pro Lys Ile Leu Ala Gln Thr Ala Ala His
 115 120 125
 Val Ala Gly Ala Ala Tyr Tyr Gln Arg Gln Asp Val Glu Ala Asp
 130 135 140
 Pro Trp Gly Asn Gln Arg Ile Ser Gly Val Cys Ile His Pro Arg Phe
 145 150 155 160
 Gly Gly Trp Phe Ala Ile Arg Gly Val Val Leu Leu Pro Gly Ile Glu
 165 170 175
 Val Pro Asp Leu Pro Pro Arg Lys Pro His Asp Cys Val Pro Thr Arg
 180 185 190
 Ala Asp Arg Ile Ala Leu Leu Glu Gly Phe Asn Phe His Trp Arg Asp
 195 200 205
 Trp Thr Tyr Arg Asp Ala Val Thr Pro Gln Glu Arg Tyr Ser Glu Glu
 210 215 220
 Gln Lys Ala Tyr Phe Ser Thr Pro Pro Ala Gln Arg Leu Ala Leu Leu
 225 230 235 240
 Gly Leu Ala Gln Pro Ser Glu Lys Pro Ser Ser Pro Ser Pro Asp Leu
 245 250 255
 Pro Phe Thr Thr Pro Ala Pro Lys Lys Pro Gly Asn Pro Ser Arg Ala
 260 265 270
 Arg Ser Trp Leu Ser Pro Arg Val Ser Pro Pro Ala Ser Pro Gly Pro
 275 280 285

<210> 3349

<211> 1132

<212> DNA

<213> Homo sapiens

<400> 3349

nnaaaatcgg ggcacggtca tcgtggagcg ctggtggaag gtaccgctgg ccggggaggg
 60
 ccggaagccg cgctgcacc ggcgacatcg cgtctataag ctggtggagg acacgaagca
 120
 tcggcccaaa gaaaacctgg agctcatcct gacgcagtcg gtggagagta aggcccgggc
 180
 cgaggcgctt cctctcaggc tgatgttgga gtccggggtg acctggtctc agtgaagaaa
 240
 tctttaggcc ggaatcgact ccttctcag ggactggctg tatatgcac ccctgaaaac
 300
 aagaagctgt ttgaagagga gaaattgctg agacaagaag gaaaattaga gaagatccag
 360
 accaaggcag gtgaggcgac agtgaaattt ctaaaaagct gtcgcctgga ggtagggatg
 420
 aagaacaatg tcaaatggga gctgaaccct gaaatagttg cccgccactt cttaagaat
 480
 cttggtgttg tggttgcccc acatacatta aagttaccag cagagcctat cacacggtgg
 540
 ggcgagtatt ggtgtgaggt gacggtaaat gggcttgata ctgtgagagt gcctatgtct
 600
 gtcgtgaact ttgagaagcc caagaccaa agatataagt actgggttagc ccagcaagct
 660
 gccaaaggcta tggcccccac cagccccag atctaaatct actctccctc caaggcagca
 720

aagcagaatc gggagcagtg gagcagaaat gtgcaagcac cctgatctca ctcccagctc
 780
 tgaccaata cagaatttta gagaacatct gaagacatca gactgcactg cgtatacatg
 840
 ttgaattctt catttttgcc atctttaact gtcactactg gggcagggaa gtcctgttcc
 900
 agaagtacca ggctgtagat ttgataagct agatgcagta gaccgaaacc atccaaaacc
 960
 tgtttagctt cttcctccat tggagtttat tgggacaaac aggagagcca gccattgtct
 1020
 ccagtacttg cctcattctc atcatccaaa ctgaacattt gtatcccaag cagaaataaa
 1080
 gagaatatgt tcttttttaa aaaaaaaaaa aaaaaaaaaa aaaaaaattg gc
 1132

<210> 3350
 <211> 174
 <212> PRT
 <213> Homo sapiens

<400> 3350
 Gly Pro Gly Arg Gly Ala Ser Ser Gln Ala Asp Val Gly Val Arg Gly
 1 5 10 15
 Asp Leu Val Ser Val Lys Lys Ser Leu Gly Arg Asn Arg Leu Leu Pro
 20 25 30
 Gln Gly Leu Ala Val Tyr Ala Ser Pro Glu Asn Lys Lys Leu Phe Glu
 35 40 45
 Glu Glu Lys Leu Leu Arg Gln Glu Gly Lys Leu Glu Lys Ile Gln Thr
 50 55 60
 Lys Ala Gly Glu Ala Thr Val Lys Phe Leu Lys Ser Cys Arg Leu Glu
 65 70 75 80
 Val Gly Met Lys Asn Asn Val Lys Trp Glu Leu Asn Pro Glu Ile Val
 85 90 95
 Ala Arg His Phe Lys Asn Leu Gly Val Val Val Ala Pro His Thr
 100 105 110
 Leu Lys Leu Pro Ala Glu Pro Ile Thr Arg Trp Gly Glu Tyr Trp Cys
 115 120 125
 Glu Val Thr Val Asn Gly Leu Asp Thr Val Arg Val Pro Met Ser Val
 130 135 140
 Val Asn Phe Glu Lys Pro Lys Thr Lys Arg Tyr Lys Tyr Trp Leu Ala
 145 150 155 160
 Gln Gln Ala Ala Lys Ala Met Ala Pro Thr Ser Pro Gln Ile
 165 170

<210> 3351
 <211> 1422
 <212> DNA
 <213> Homo sapiens

<400> 3351
 nnggaatata gaagagaaac tagaaatata cgtattttgt ttcacatttg aacagtcatt
 60
 cttgaggaat actccatacc tgagtagaca gccatgtggc catcgagct actaattttc
 120

atgatgctct tagctccaat aattcatggg ggcaagcaca gtgaacgaca tcctgccctc
180
gctgctgcgc cgcgatgcgc tgagcgccgc caaggagggtg ttgtaccacc tggacatcta
240
cttcagcagc cagctgcaga gcgcgcccgt gcccatcgtg gacaagggcc ccgtggagct
300
gctggaggag ttcgtgttcc aggtgcccaa ggagcgcagc gcgcagccca agagactgaa
360
ttcccttcag gagcttcaac ttcttgaaat catgtgcaat tatttccagg agcaaacc
420
ggactctgtt cggcagatta ttttttcac ccttttcagc cctcaagggg acaaagccga
480
tgacagccgg atgagcttgt tgggaaaact ggtctccatg gcggtggctg tgtgtcgaat
540
cccgggtgtg gagtgtgctg cctcctgggt tcagcggacg cccgtggttt actgtgtgag
600
gttagccaag gcccttgtag atgactactg ctgtttgggt cccggatcca ttcagacgct
660
gaagcagata ttcagtgcga gcccgagatt ctgctgccag ttcacacct ccgttaccgc
720
gctctatgac ctgtcatcag atgacctcat tccacctatg gacttgcttg aaatgattgt
780
cacctggatt tttgaggacc caagggtgat tctcatcact tttttaaata ctccgattgc
840
ggccaatctg ccaataggat tcttagagct caccgcgctc gttggattga tccgctgggtg
900
cgtgaaggca cccctggctt ataaaaggaa aaagaagccc cccttatcca atggccatgt
960
cagcaacaag gtcacaaagg acccgggcgt ggggatggac agagactccc acctcttgta
1020
ctcaaaactc cacctcagcg tcctgcaagt gctcatgacg ctgcagctgc acctgaccga
1080
gaagaatctg tatgggcgcc tggggctgat cctcttcgac cacatggtcc cgctggtaga
1140
ggagatcaac aggttggcgg atgaactgaa cccctcaac gcctcccagg agattgagct
1200
ctcgctggac cggctggcgc aggtctgca ggtggccatg gcctcaggag ctctgctgtg
1260
cacgagagat gaccttagaa ccttgttctc caggctcccc cgtaataacc tcctccagct
1320
ggtgatctcg ggtcccgtgc agcagtcgcc tcacgccgcg ctccccccgg ggttctaccc
1380
ccacatccac acgccccgcg tgggctacgg ggctgtcccc cc
1422

<210> 3352

<211> 97

<212> PRT

<213> Homo sapiens

<400> 3352

Met	Trp	Pro	Ser	Gln	Leu	Leu	Ile	Phe	Met	Met	Leu	Leu	Ala	Pro	Ile
1				5				10					15		
Ile	His	Gly	Gly	Lys	His	Ser	Glu	Arg	His	Pro	Ala	Leu	Ala	Ala	Ala

```

          20          25          30
Pro Arg Cys Ala Glu Arg Arg Gln Gly Gly Val Val Pro Pro Gly His
   35          40          45
Leu Leu Gln Gln Pro Ala Ala Glu Arg Ala Ala Ala His Arg Gly Gln
   50          55          60
Gly Pro Arg Gly Ala Ala Gly Gly Val Arg Val Pro Gly Ala Gln Gly
   65          70          75          80
Ala Gln Arg Ala Ala Gln Glu Thr Glu Phe Pro Ser Gly Ala Ser Thr
          85          90          95
Ser

```

<210> 3353
 <211> 420
 <212> DNA
 <213> Homo sapiens

```

<400> 3353
nngaagctat cctcaccctc ttcccgacct cggctcctgtg aagtccttgg aattaacatc
60
tttccatctc ctgaccagcc tgccaatgtg cctgtcctcc cacctgccat gaacacgggg
120
ggctccctac ctgacctcac caacctgcac tttccccccac cactgcccac ccccttggac
180
cctgaagaga cagcctaccc tagcctgagt ggggggcaaca gtacctcaa tttgaccac
240
accatgactc acctgggcat cagcaggggc atgggccttg gcccaggcta tgatgcacca
300
gggcgtcccc ctggatacca gtaaactgtc cactgaccag cggttacccc cataccata
360
cagttcccca agtttggtnt ctgcttacct agccccacac cccaaagttt taacagcagc
420

```

<210> 3354
 <211> 107
 <212> PRT
 <213> Homo sapiens

```

<400> 3354
Xaa Lys Leu Ser Ser Ser Ser Arg Pro Arg Ser Cys Glu Val Pro
  1          5          10          15
Gly Ile Asn Ile Phe Pro Ser Pro Asp Gln Pro Ala Asn Val Pro Val
          20          25          30
Leu Pro Pro Ala Met Asn Thr Gly Gly Ser Leu Pro Asp Leu Thr Asn
          35          40          45
Leu His Phe Pro Pro Pro Leu Pro Thr Pro Leu Asp Pro Glu Glu Thr
          50          55          60
Ala Tyr Pro Ser Leu Ser Gly Gly Asn Ser Thr Ser Asn Leu Thr His
          65          70          75          80
Thr Met Thr His Leu Gly Ile Ser Arg Gly Met Gly Leu Gly Pro Gly
          85          90          95
Tyr Asp Ala Pro Gly Arg Pro Pro Gly Tyr Gln
          100          105

```

<210> 3355
 <211> 474
 <212> DNA
 <213> Homo sapiens

<400> 3355
 gaacagccag ttgaacctga tggccccctt cctggctcag acaataacca agaaaagaaa
 60
 gtaagattat ctccagccaa aatgtcaacc aagaattcta cagatctagt tgaatatgtt
 120
 gacaagagtc atgctttttct ccccatcatt ccaaacaccc agagaggtca gctagaagac
 180
 agactgaaca accaggcgcg taccatagct ttccttcttg aacaagcctt ccgcatcaag
 240
 gaggacatct ctgcttgccct gcaggggacc catggctttc gaaaagagga atcgctcgcc
 300
 aggaagttac tggaaagcca catccagacc atcaccagca tcgtcaaaaa actcagccaa
 360
 aatattgaga ttttagaaga ccaaataaga gctcgagatc aggcggccac aggaactaac
 420
 ttgcagtagc acgagataaa catcaaacac ctacaaggag ttgggagatc tttc
 474

<210> 3356
 <211> 131
 <212> PRT
 <213> Homo sapiens

<400> 3356
 Met Ser Thr Lys Asn Ser Thr Asp Leu Val Glu Tyr Val Asp Lys Ser
 1 5 10 15
 His Ala Phe Leu Pro Ile Ile Pro Asn Thr Gln Arg Gly Gln Leu Glu
 20 25 30
 Asp Arg Leu Asn Asn Gln Ala Arg Thr Ile Ala Phe Leu Leu Glu Gln
 35 40 45
 Ala Phe Arg Ile Lys Glu Asp Ile Ser Ala Cys Leu Gln Gly Thr His
 50 55 60
 Gly Phe Arg Lys Glu Glu Ser Leu Ala Arg Lys Leu Leu Glu Ser His
 65 70 75 80
 Ile Gln Thr Ile Thr Ser Ile Val Lys Lys Leu Ser Gln Asn Ile Glu
 85 90 95
 Ile Leu Glu Asp Gln Ile Arg Ala Arg Asp Gln Ala Ala Thr Gly Thr
 100 105 110
 Asn Phe Ala Val His Glu Ile Asn Ile Lys His Leu Gln Gly Val Gly
 115 120 125
 Arg Ser Phe
 130

<210> 3357
 <211> 2268
 <212> DNA
 <213> Homo sapiens

<400> 3357

nnggagcccc tggctctgatt ggtcctcacc atgataaccc tccacaacag gtactccagc
60
agcagccatt atggatttgg atgtgctctt tatacccatg tctctaattg cagatggagg
120
agggcctata aaaataattc cttcttgctt acaaagttca gcaaattcca tgttttctga
180
aagaaaaccg catcctggat ggatagcctg tgcagcagag gtcttggcca cttgaatgat
240
tttctccata gataggtagc tctgctggga ggaacgggtt tggcgtgtgg gacgcagctg
300
cctctgtact ggggagtcac ggagtggccg ggctccaggg acatggcggc ggctctgcg
360
gtgtcgggtg tgctggtggc ggcgagagg aaccggtggc atcgtctccc gagcctgctc
420
ctgccgccga ggacatgggt gtggaggcaa agaaccatga agtacacaac agccacagga
480
agaaacatta ccaaggtcct cattgcaaac agaggagaaa ttgcctgcag ggtgatgcgc
540
acagccaaaa aactgggtgt acagactgtg gcggtttata gtgaggctga cagaaattcc
600
atgcatgtag atatggcaga tgaagcatat tccatcggcc ccgctccctc ccagcagagc
660
tacctatcta tggagaaaat cattcaagtg gccaaagacct ctgctgcaca ggctatccat
720
ccaggatgcg gttttctttc agaaaacatg gaatttgctg aactttgtaa gcaagaagga
780
attattttta taggccctcc tccatctgca attagagaca tgggtataaa gagcacatcc
840
aaatccataa tggctgctgc tggagtacct gttgtggagg gttatcatgg tgaggaccaa
900
tcagaccagt gcctgaagga acacgccagg agaattggct atcctgtcat gattaaagcc
960
gtccgggggtg gaggaggaaa aggaatgagg attgttagat cagaacaaga atttcaagaa
1020
cagttagagt cagcacggag agaagctaag aagtctttca atgatgatgc tatgctgatc
1080
gagaagtttg tagacacacc gaggcattga gaagtccagg tgtttggtga tcaccatggc
1140
aatgctgtgt acttgtttga aagagactgt agtgtgcaga ggcgacatca gaagatcatt
1200
gaggaggccc cagcgctggg tattaaatct gaagtaagaa aaaagctggg agaagctgca
1260
gtcagagctg ctaaagctgt aaattatgtt ggagcaggga ctgtggagtt tattatggac
1320
tcaaaacata atttctgttt catggagatg aatacaaggc tgcaagtgga acatcctgtt
1380
actgagatga tcacaggaac tgacttgggtg gagtggcagc ttagaattgc agcaggagag
1440
aagattcctt tgagccagga agaaataact ctgcagggcc atgccttcga agctagaata
1500
tatgcagaag atcctagcaa taacttcatg cctgtggcag gccattagt gcacctctct
1560
actcctcgag cagacccttc caccaggatt gaaactggag tacggcaagg agacgaagtt
1620

tccgtgcatt atgaccccat gattgcgaag ctggctcgtgt gggcagcaga tcgccaggcg
 1680
 gcattgacaa aactgaggta cagccttcgt cagtacaata ttgttggtact gcacaccaac
 1740
 attgacttct tactcaacct gtctggccac ccagagtttg aagctgggaa cgtgcacact
 1800
 gatttcatcc ctcaacacca caaacagttg ttgctcagtc ggaaggctgc agccaaagag
 1860
 tctttatgcc aggcagccct gggctctatc ctcaaggaga aagccatgac cgacactttc
 1920
 actcttcagg cacatgatca attctctcca ttttcgtcta gcagtgggaag aagactgaat
 1980
 atctcgtata ccagaaacat gactcttaaa gatggtaaaa acagttttcg tctcctcgga
 2040
 taatcaacca tttccatact catgtaatct aggcatactc tggagttatt acagggtttgg
 2100
 ttccagacca ctacaataaa atgtagccat agctgtaacg tataaccatg atgggtctta
 2160
 tagcatgcag attgaagata aaactttcca agtccttggt aatctttaca gcgagggaga
 2220
 ctgcacttac ctgaaatggt ctgttaatgg agttgctagt aaagcgaa
 2268

<210> 3358

<211> 493

<212> PRT

<213> Homo sapiens

<400> 3358

Gln	Thr	Val	Ala	Val	Tyr	Ser	Glu	Ala	Asp	Arg	Asn	Ser	Met	His	Val
1			5					10						15	
Asp	Met	Ala	Asp	Glu	Ala	Tyr	Ser	Ile	Gly	Pro	Ala	Pro	Ser	Gln	Gln
		20						25				30			
Ser	Tyr	Leu	Ser	Met	Glu	Lys	Ile	Gln	Val	Ala	Lys	Thr	Ser	Ala	
	35					40					45				
Ala	Gln	Ala	Ile	His	Pro	Gly	Cys	Gly	Phe	Leu	Ser	Glu	Asn	Met	Glu
	50					55				60					
Phe	Ala	Glu	Leu	Cys	Lys	Gln	Glu	Gly	Ile	Ile	Phe	Ile	Gly	Pro	Pro
65				70					75					80	
Pro	Ser	Ala	Ile	Arg	Asp	Met	Gly	Ile	Lys	Ser	Thr	Ser	Lys	Ser	Ile
				85					90					95	
Met	Ala	Ala	Ala	Gly	Val	Pro	Val	Val	Glu	Gly	Tyr	His	Gly	Glu	Asp
			100					105					110		
Gln	Ser	Asp	Gln	Cys	Leu	Lys	Glu	His	Ala	Arg	Arg	Ile	Gly	Tyr	Pro
	115					120						125			
Val	Met	Ile	Lys	Ala	Val	Arg	Gly	Gly	Gly	Gly	Lys	Gly	Met	Arg	Ile
	130					135					140				
Val	Arg	Ser	Glu	Gln	Glu	Phe	Gln	Glu	Gln	Leu	Glu	Ser	Ala	Arg	Arg
145				150						155				160	
Glu	Ala	Lys	Lys	Ser	Phe	Asn	Asp	Asp	Ala	Met	Leu	Ile	Glu	Lys	Phe
			165					170					175		
Val	Asp	Thr	Pro	Arg	His	Val	Glu	Val	Gln	Val	Phe	Gly	Asp	His	His
	180							185					190		
Gly	Asn	Ala	Val	Tyr	Leu	Phe	Glu	Arg	Asp	Cys	Ser	Val	Gln	Arg	Arg

195	200	205
His Gln Lys Ile Ile Glu Glu Ala Pro Ala Pro Gly Ile Lys Ser Glu		
210	215	220
Val Arg Lys Lys Leu Gly Glu Ala Ala Val Arg Ala Ala Lys Ala Val		
225	230	235
Asn Tyr Val Gly Ala Gly Thr Val Glu Phe Ile Met Asp Ser Lys His		
245	250	255
Asn Phe Cys Phe Met Glu Met Asn Thr Arg Leu Gln Val Glu His Pro		
260	265	270
Val Thr Glu Met Ile Thr Gly Thr Asp Leu Val Glu Trp Gln Leu Arg		
275	280	285
Ile Ala Ala Gly Glu Lys Ile Pro Leu Ser Gln Glu Glu Ile Thr Leu		
290	295	300
Gln Gly His Ala Phe Glu Ala Arg Ile Tyr Ala Glu Asp Pro Ser Asn		
305	310	315
Asn Phe Met Pro Val Ala Gly Pro Leu Val His Leu Ser Thr Pro Arg		
325	330	335
Ala Asp Pro Ser Thr Arg Ile Glu Thr Gly Val Arg Gln Gly Asp Glu		
340	345	350
Val Ser Val His Tyr Asp Pro Met Ile Ala Lys Leu Val Val Trp Ala		
355	360	365
Ala Asp Arg Gln Ala Ala Leu Thr Lys Leu Arg Tyr Ser Leu Arg Gln		
370	375	380
Tyr Asn Ile Val Gly Leu His Thr Asn Ile Asp Phe Leu Leu Asn Leu		
385	390	395
Ser Gly His Pro Glu Phe Glu Ala Gly Asn Val His Thr Asp Phe Ile		
405	410	415
Pro Gln His His Lys Gln Leu Leu Leu Ser Arg Lys Ala Ala Ala Lys		
420	425	430
Glu Ser Leu Cys Gln Ala Ala Leu Gly Leu Ile Leu Lys Glu Lys Ala		
435	440	445
Met Thr Asp Thr Phe Thr Leu Gln Ala His Asp Gln Phe Ser Pro Phe		
450	455	460
Ser Ser Ser Ser Gly Arg Arg Leu Asn Ile Ser Tyr Thr Arg Asn Met		
465	470	475
Thr Leu Lys Asp Gly Lys Asn Ser Phe Arg Leu Leu Gly		
485	490	

<210> 3359

<211> 652

<212> DNA

<213> Homo sapiens

<400> 3359

```

ntccggacgt aatcgtgggt tttgttctgc aataggcggc ttagagggag gggctttttc
60
gcctatacct actgtagctt ctccacgtat ggaccctaaa ggctactgct gctactacgg
120
ggctagacag ttactgtctc agctctagga tgtgcgttct tccactagaa gctcttctga
180
gggaggtaat taaaaaacag tggaatggaa aaacagtgcg gtagtcatcc tgtaatatgc
240
tccttgtcaa caatgtatac attcctgcta ggtgccatat tcattgcttt aagctcaagt
300

```

cgcatcttac tagtgaagta ttctgccaat gaagaaaaca agtatgatta tcttccaact
 360
 actgtgaatg tgtgctcaga actggtgaag ctagttttct gtgtgcttgt gtcattctgt
 420
 gttataaaga aagatcatca aagtagaaat ttgaaatatg cttcctggaa ggaattctct
 480
 gatttcatga agtgggccat tcttgccctt ctttatttcc tggataactt gattgtcttc
 540
 tatgtcctgt cctatcttca accagccatg gctgttatct tctcaaattt tagcattata
 600
 acaacagctc ttctattcag gatagtgtg aagaggcgtc taaactggat cc
 652

<210> 3360

<211> 149

<212> PRT

<213> Homo sapiens

<400> 3360

Met	Glu	Lys	Gln	Cys	Cys	Ser	His	Pro	Val	Ile	Cys	Ser	Leu	Ser	Thr
1				5					10					15	
Met	Tyr	Thr	Phe	Leu	Leu	Gly	Ala	Ile	Phe	Ile	Ala	Leu	Ser	Ser	Ser
			20					25					30		
Arg	Ile	Leu	Leu	Val	Lys	Tyr	Ser	Ala	Asn	Glu	Glu	Asn	Lys	Tyr	Asp
		35					40					45			
Tyr	Leu	Pro	Thr	Thr	Val	Asn	Val	Cys	Ser	Glu	Leu	Val	Lys	Leu	Val
	50					55					60				
Phe	Cys	Val	Leu	Val	Ser	Phe	Cys	Val	Ile	Lys	Lys	Asp	His	Gln	Ser
65					70					75				80	
Arg	Asn	Leu	Lys	Tyr	Ala	Ser	Trp	Lys	Glu	Phe	Ser	Asp	Phe	Met	Lys
			85					90					95		
Trp	Ser	Ile	Pro	Ala	Phe	Leu	Tyr	Phe	Leu	Asp	Asn	Leu	Ile	Val	Phe
			100					105					110		
Tyr	Val	Leu	Ser	Tyr	Leu	Gln	Pro	Ala	Met	Ala	Val	Ile	Phe	Ser	Asn
		115				120						125			
Phe	Ser	Ile	Ile	Thr	Thr	Ala	Leu	Leu	Phe	Arg	Ile	Val	Leu	Lys	Arg
	130					135					140				
Arg	Leu	Asn	Trp	Ile											
145															

<210> 3361

<211> 1040

<212> DNA

<213> Homo sapiens

<400> 3361

nntccggatg gtctggcgcg ctgggctcgc taggtttgtg ctggcgaggg gacgggggtgg
 60
 gacgggagac ccggacccaa gaagtgggag gaccgcgcgt gtcgcggcct agcggcgagg
 120
 ggagtcgctt gcgcgcgcag cggaggccag tgcgccggcg catagcgagc ccgggtctgt
 180
 gatcgcgcgag gcgggagtga agatagtcca agtcctaaga gacagcgccct ctctcattca
 240

gtcttttgatt atacatcagc atcaccagct ccctcaccac caatgcgacc atgggagatg
 300
 acatcaaata ggcagccccc ttcagttcga ccaagccaac atcacttctc aggggaacga
 360
 tgcaacacac ctgcacgcaa cagaagaagt cctcctgtca ggcgccagag aggaagaagg
 420
 gatcgtctgt ctgcacataa ttccattagt caagatgaaa actatcacca tctcccttac
 480
 gcacagcagc aagcaataga ggagcctcga gccttccacc ctccgaatgt atctccccgt
 540
 ctgctacatc ctgctgctca tccaccccag cagaatgcag tcatgggtga catacatgat
 600
 cagctccatc aaggaacagt ccctgtttct tacacagtaa caacagtggc accacatggg
 660
 attccactct gcacaggcca gcacatccct gctttagta cacagcaggt cccaggatgc
 720
 tctgtgggtt tcagtggaca gcacctccct gtctgtagtg tgctcctcc aatgcttcag
 780
 gcatgttcag ttcagcactt accagtacca tatgctgcat tcccacctt tatttctagt
 840
 gatccatttc ttatacatcc tctcactt tctcccatc atcctcctca tttgccacca
 900
 ccaggccagt ttgtcccttt ccaaacacag caatcacgat cgctctgca aaggatagaa
 960
 aatgaagtgg aactcttagg agaacatctt ccaggagccc acccccagca ccccatctg
 1020
 ttaataaata tctcaactcc
 1040

<210> 3362

<211> 252

<212> PRT

<213> Homo sapiens

<400> 3362

Met	Arg	Pro	Trp	Glu	Met	Thr	Ser	Asn	Arg	Gln	Pro	Pro	Ser	Val	Arg
1				5					10					15	
Pro	Ser	Gln	His	His	Phe	Ser	Gly	Glu	Arg	Cys	Asn	Thr	Pro	Ala	Arg
			20					25					30		
Asn	Arg	Arg	Ser	Pro	Pro	Val	Arg	Arg	Gln	Arg	Gly	Arg	Arg	Asp	Arg
			35				40					45			
Leu	Ser	Arg	His	Asn	Ser	Ile	Ser	Gln	Asp	Glu	Asn	Tyr	His	His	Leu
			50			55					60				
Pro	Tyr	Ala	Gln	Gln	Gln	Ala	Ile	Glu	Glu	Pro	Arg	Ala	Phe	His	Pro
65					70				75					80	
Pro	Asn	Val	Ser	Pro	Arg	Leu	Leu	His	Pro	Ala	Ala	His	Pro	Pro	Gln
				85				90						95	
Gln	Asn	Ala	Val	Met	Val	Asp	Ile	His	Asp	Gln	Leu	His	Gln	Gly	Thr
			100				105					110			
Val	Pro	Val	Ser	Tyr	Thr	Val	Thr	Val	Ala	Pro	His	Gly	Ile	Pro	
			115			120					125				
Leu	Cys	Thr	Gly	Gln	His	Ile	Pro	Ala	Cys	Ser	Thr	Gln	Val	Pro	
			130			135					140				
Gly	Cys	Ser	Val	Val	Phe	Ser	Gly	Gln	His	Leu	Pro	Val	Cys	Ser	Val

145 150 155 160
 Pro Pro Pro Met Leu Gln Ala Cys Ser Val Gln His Leu Pro Val Pro
 165 170 175
 Tyr Ala Ala Phe Pro Pro Leu Ile Ser Ser Asp Pro Phe Leu Ile His
 180 185 190
 Pro Pro His Leu Ser Pro His His Pro Pro His Leu Pro Pro Gly
 195 200 205
 Gln Phe Val Pro Phe Gln Thr Gln Gln Ser Arg Ser Pro Leu Gln Arg
 210 215 220
 Ile Glu Asn Glu Val Glu Leu Leu Gly Glu His Leu Pro Gly Ala His
 225 230 235 240
 Pro Gln His Pro His Leu Leu Ile Asn Ile Ser Thr
 245 250

<210> 3363

<211> 718

<212> DNA

<213> Homo sapiens

<400> 3363

cagaaggacc ccaggatggc ggtcatcatg ccaggaacg ttggtgatgg ggaatgggtt
 60
 ggccagcatg atcagggacc ccgtcatgcc catgattttt tgggtggcat tggcgaccga
 120
 gtagctcagg agtgtctccg gagccactg gagaagcccc ccaacggcct cctcttcccc
 180
 cagcacgggg actatcagta cggccgcaac aacatctaaa cagaccactt ccaatacagc
 240
 cggcagagct acccaaactc gtacagtttg aaccgctatg atgtgtagag tccaaaggac
 300
 aggaccagac tgttggtgac tccttccccg gccccacag cagtatcaga aacttctgac
 360
 aatcagtga tgtacaacc agccgagggg acggtgcata actctccatc agaagccctg
 420
 gggttccttg cccccgtga gccgcaggag gatgcgttgc ctgcagtga gacggccgtg
 480
 agctctgggc aaacctaac agagaccagt gtcccatgct ctttcttctt ggagcctgtc
 540
 atctgagggc cgtgtccctg cggagatctt ggccacgttg tacctttcca tgtggaatta
 600
 ttccccaagc agtgtagctc agagcacttg tgtctgcatt ccagataaca ttcaggacct
 660
 gtgtgaaaag ctggggtcac tgtggctgta gaccatgaac tggcagtggg ggtgtcca
 718

<210> 3364

<211> 163

<212> PRT

<213> Homo sapiens

<400> 3364

Met Gly His Trp Ser Leu Phe Arg Phe Ala Gln Ser Ser Arg Pro Ser
 1 5 10 15
 Ala Leu Gln Ala Thr His Pro Pro Ala Ala His Gly Gly Pro Gly Thr

		20						25					30				
Pro	Gly	Leu	Met	Glu	Ser	Tyr	Ala	Pro	Ser	Pro	Arg	Leu	Gly	Cys			
		35					40				45						
Thr	Phe	Thr	Asp	Cys	Gln	Lys	Phe	Leu	Ile	Leu	Leu	Trp	Gly	Pro	Gly		
	50					55					60						
Lys	Glu	Ser	Pro	Thr	Val	Trp	Ser	Cys	Pro	Leu	Asp	Ser	Thr	His	His		
65					70					75				80			
Ser	Gly	Ser	Asn	Cys	Thr	Ser	Leu	Gly	Ser	Ser	Ala	Gly	Cys	Ile	Gly		
			85					90					95				
Ser	Gly	Leu	Phe	Arg	Cys	Cys	Cys	Gly	Arg	Thr	Asp	Ser	Pro	Arg	Ala		
		100						105					110				
Gly	Gly	Arg	Gly	Gly	Arg	Trp	Gly	Ala	Ser	Pro	Val	Gly	Ser	Gly	Asp		
	115						120					125					
Thr	Pro	Glu	Leu	Leu	Gly	Arg	Gln	Cys	His	Pro	Lys	Asn	His	Gly	His		
	130					135					140						
Asp	Gly	Val	Pro	Asp	His	Ala	Gly	Gln	Pro	Ile	Pro	His	His	Gln	Arg		
145					150					155					160		
Ser	Trp	Ala															

<210> 3365

<211> 2389

<212> DNA

<213> Homo sapiens

<400> 3365

gcaggaagat ggcggcggtg ggcggaggtgt gactggacgc gggactcagc ggccggattt
60
tctcttccct tcttttccct tttccttccc tatttgaaat tggcatcgag ggggctaagt
120
tcgggtggca gcgcggggcg caacgcaggg gtcacggcga cggcggcggc ggctgacggc
180
tggaagggtg ggcttccctc accgctcgtc ctcttccctc gctccgctcg gtgtcaggcg
240
cggcggcggc gcggcgggcg gacttcgtcc ctctcctgc tccccccac accggagcgg
300
gcaactctcg ctctgccatc ccccgaccct tcaccccgag gactgggcgc ctctcgggc
360
gcagctgagg gagcgggggc cggctctctg ctcggttgtc gagcctccat gtcggataat
420
cagaactgga actcgtcggg ctcgaggag gatccagaga cggagtctgg gccgcctgtg
480
gagcgtcgcg gggtcctcag taagtggaca aactacattc atgggtggca ggatcgttgg
540
gtagttttga aaaataatgc tctgagttac tacaaatctg aagatgaaac agagtatggc
600
tgcagaggat ccatctgtct tagcaaggct gtcacacac ctacgattt tgatgaatgt
660
cgatttgata ttagtgtaaa tgatagtgtt tggatatctc gtgctcagga tccagatcat
720
agacagcaat ggatagatgc cattgaacag cacaagactg aatctggata tggatctgaa
780
tccagcttgc gtcgacatgg ctcaatggtg tccctggtgt ctggagcaag tggctactct
840

gcaacatcca cctcttcatt caagaaaggc cacagtttac gtgagaagtt ggctgaaatg
900
gaaacattta gagacatctt atgtagacaa gttgacacgc tacagaagta ctttgatgcc
960
tgtgctgatg ctgtctctaa ggatgaactt caaagggata aagtggtaga agatgatgaa
1020
gatgactttc ctacaacgcg ttctgatggg gacttcttgc atagtaccaa cggcaataaa
1080
gaaaagttat ttccacatgt gacaccaaaa ggaattaatg gtatagactt taaaggggaa
1140
gcgataactt ttaaagcaac tactgctgga atccttgcaa cactttctca ttgtattgaa
1200
ctaattggta aacgtgagga cagctggcag aagagactgg ataaggaaac tgagaagaaa
1260
agaagaacag aggaagcata taaaaatgca atgacagaac ttaagaaaaa atcccacttt
1320
ggaggaccag attatgaaga aggccctaac agtctgatta atgaagaaga gttctttgat
1380
gctgttgaag ctgctcttga cagacaagat aaaatagaag aacagtcaca gagtgaaaag
1440
gtgagattac attggcctac atccttgccc tctggagatg cttttcttc tgtggggaca
1500
catagatttg tccaaaagcc ctatagtgcg tcttctcca tgtcttccat tgatctagtc
1560
agtgcctctg atgatgttca cagattcagc tcccaggttg aagagatggg gcagaaccac
1620
atgacttact cattacagga tgtaggcgga gatgccaatt ggcagttggg tgtagaagaa
1680
ggagaaatga aggtatacag aagagaagta gaagaaaatg ggattgttct ggatccttta
1740
aaagctacc atgcagttaa aggcgtcaca ggacatgaag tctgcaatta tttctggaat
1800
gttgacgttc gcaatgactg ggaaacaact atagaaaact ttcattgtggg ggaaacatta
1860
gctgataatg caatcatcat ttatcaaaca cacaagaggg tgtggcctgc ttctcagcga
1920
gacgtattat atctttctgt cattcgaaag ataccagcct tgactgaaaa tgaccctgaa
1980
acttggatag tttgtaattt ttctgtggat catgacagtg ctctctaaa caaccgatgt
2040
gtccgtgcca aaataaatgt tgctatgatt tgtcaaacct tggtaagccc accagagggg
2100
aaccaggaaa ttagcagga caacattcta tgcaagatta catatgtagc taatgtgaac
2160
cctggaggat gggcaccagc ctgagtgtta agggcagtgg caaagcgaga gtatcctaaa
2220
tttctaaaac gttttacttc ttacgtccaa gaaaaaactg caggaaagcc tattttgttc
2280
tagtattaac aggtactaga agatatgttt tatctttttt taactttatt tgactaatat
2340
gactgtcaat actaaaattt agttgttgaa agtatttact atgtttttt
2389

<210> 3366

<211> 624
 <212> PRT
 <213> Homo sapiens

<400> 3366

```

Met Ser Asp Asn Gln Asn Trp Asn Ser Ser Gly Ser Glu Glu Asp Pro
 1          5          10          15
Glu Thr Glu Ser Gly Pro Pro Val Glu Arg Cys Gly Val Leu Ser Lys
          20          25          30
Trp Thr Asn Tyr Ile His Gly Trp Gln Asp Arg Trp Val Val Leu Lys
          35          40          45
Asn Asn Ala Leu Ser Tyr Tyr Lys Ser Glu Asp Glu Thr Glu Tyr Gly
          50          55          60
Cys Arg Gly Ser Ile Cys Leu Ser Lys Ala Val Ile Thr Pro His Asp
65          70          75          80
Phe Asp Glu Cys Arg Phe Asp Ile Ser Val Asn Asp Ser Val Trp Tyr
          85          90          95
Leu Arg Ala Gln Asp Pro Asp His Arg Gln Gln Trp Ile Asp Ala Ile
          100          105          110
Glu Gln His Lys Thr Glu Ser Gly Tyr Gly Ser Glu Ser Ser Leu Arg
          115          120          125
Arg His Gly Ser Met Val Ser Leu Val Ser Gly Ala Ser Gly Tyr Ser
          130          135          140
Ala Thr Ser Thr Ser Ser Phe Lys Lys Gly His Ser Leu Arg Glu Lys
145          150          155          160
Leu Ala Glu Met Glu Thr Phe Arg Asp Ile Leu Cys Arg Gln Val Asp
          165          170          175
Thr Leu Gln Lys Tyr Phe Asp Ala Cys Ala Asp Ala Val Ser Lys Asp
          180          185          190
Glu Leu Gln Arg Asp Lys Val Val Glu Asp Asp Glu Asp Asp Phe Pro
          195          200          205
Thr Thr Arg Ser Asp Gly Asp Phe Leu His Ser Thr Asn Gly Asn Lys
          210          215          220
Glu Lys Leu Phe Pro His Val Thr Pro Lys Gly Ile Asn Gly Ile Asp
225          230          235          240
Phe Lys Gly Glu Ala Ile Thr Phe Lys Ala Thr Thr Ala Gly Ile Leu
          245          250          255
Ala Thr Leu Ser His Cys Ile Glu Leu Met Val Lys Arg Glu Asp Ser
          260          265          270
Trp Gln Lys Arg Leu Asp Lys Glu Thr Glu Lys Lys Arg Arg Thr Glu
          275          280          285
Glu Ala Tyr Lys Asn Ala Met Thr Glu Leu Lys Lys Lys Ser His Phe
          290          295          300
Gly Gly Pro Asp Tyr Glu Glu Gly Pro Asn Ser Leu Ile Asn Glu Glu
305          310          315          320
Glu Phe Phe Asp Ala Val Glu Ala Ala Leu Asp Arg Gln Asp Lys Ile
          325          330          335
Glu Glu Gln Ser Gln Ser Glu Lys Val Arg Leu His Trp Pro Thr Ser
          340          345          350
Leu Pro Ser Gly Asp Ala Phe Ser Ser Val Gly Thr His Arg Phe Val
          355          360          365
Gln Lys Pro Tyr Ser Arg Ser Ser Ser Met Ser Ser Ile Asp Leu Val
          370          375          380
Ser Ala Ser Asp Asp Val His Arg Phe Ser Ser Gln Val Glu Glu Met

```

385		390		395		400									
Val	Gln	Asn	His	Met	Thr	Tyr	Ser	Leu	Gln	Asp	Val	Gly	Gly	Asp	Ala
		405							410					415	
Asn	Trp	Gln	Leu	Val	Val	Glu	Glu	Gly	Glu	Met	Lys	Val	Tyr	Arg	Arg
		420							425					430	
Glu	Val	Glu	Glu	Asn	Gly	Ile	Val	Leu	Asp	Pro	Leu	Lys	Ala	Thr	His
		435							440					445	
Ala	Val	Lys	Gly	Val	Thr	Gly	His	Glu	Val	Cys	Asn	Tyr	Phe	Trp	Asn
		450												460	
Val	Asp	Val	Arg	Asn	Asp	Trp	Glu	Thr	Thr	Ile	Glu	Asn	Phe	His	Val
		465												480	
Val	Glu	Thr	Leu	Ala	Asp	Asn	Ala	Ile	Ile	Ile	Tyr	Gln	Thr	His	Lys
				485						490				495	
Arg	Val	Trp	Pro	Ala	Ser	Gln	Arg	Asp	Val	Leu	Tyr	Leu	Ser	Val	Ile
			500						505					510	
Arg	Lys	Ile	Pro	Ala	Leu	Thr	Glu	Asn	Asp	Pro	Glu	Thr	Trp	Ile	Val
		515							520					525	
Cys	Asn	Phe	Ser	Val	Asp	His	Asp	Ser	Ala	Pro	Leu	Asn	Asn	Arg	Cys
		530							535					540	
Val	Arg	Ala	Lys	Ile	Asn	Val	Ala	Met	Ile	Cys	Gln	Thr	Leu	Val	Ser
		545												560	
Pro	Pro	Glu	Gly	Asn	Gln	Glu	Ile	Ser	Arg	Asp	Asn	Ile	Leu	Cys	Lys
				565						570				575	
Ile	Thr	Tyr	Val	Ala	Asn	Val	Asn	Pro	Gly	Gly	Trp	Ala	Pro	Ala	Ser
			580						585					590	
Val	Leu	Arg	Ala	Val	Ala	Lys	Arg	Glu	Tyr	Pro	Lys	Phe	Leu	Lys	Arg
		595							600					605	
Phe	Thr	Ser	Tyr	Val	Gln	Glu	Lys	Thr	Ala	Gly	Lys	Pro	Ile	Leu	Phe
		610					615							620	

<210> 3367

<211> 366

<212> DNA

<213> Homo sapiens

<400> 3367

acgcgtgcag gagaggagag gccaggagat agggagggca gtttgtggat tgaaatgacc
60gagaattacg ccacagaggt gttggaggct ggcacgtggt catctcagga gcacggaggg
120tgccttcccc acttcaggcc tcttagtgct aaggatgtga gaggcaaggg ctgctgggag
180agtatttttac ggactgaagg aggcgtgccg cctgccctgc cctcctactg gtggaggaag
240gaggtgctgg gagccccaca actcagggcc ccccgacgcc cagtaaggcc actgtacacc
300cctcctgacc cagaccataa ccagcctccg attgtgcttt tgaccctgtt tccttcaggc
360

accagg

366

<210> 3368

<211> 104

<212> PRT

<213> Homo sapiens

<400> 3368

```

Met Thr Glu Asn Tyr Ala Thr Glu Val Leu Glu Ala Gly Ile Val Ala
 1              5              10              15
Ser Gln Glu His Gly Gly Cys Leu Pro His Phe Arg Pro Leu Ser Val
      20              25              30
Lys Asp Val Arg Gly Lys Gly Cys Trp Glu Ser Ile Leu Arg Thr Glu
      35              40              45
Gly Gly Val Pro Pro Ala Leu Pro Ser Tyr Trp Trp Arg Lys Glu Val
      50              55              60
Leu Gly Ala Pro Gln Leu Arg Ala Pro Arg Arg Pro Val Arg Pro Leu
65              70              75              80
Tyr Thr Pro Pro Asp Pro Asp His Asn Gln Pro Pro Ile Val Leu Leu
      85              90              95
Thr Leu Phe Pro Ser Gly Thr Arg
      100

```

<210> 3369

<211> 1405

<212> DNA

<213> Homo sapiens

<400> 3369

```

cttgttccag ggaaaagctt tcagcagcaa aggggaagcca tgaaacaaac catagaagaa
60
gataaggagc agaaaaatca ggaaaactgt ggtgcaaaga agaataaaaa gaagaggaaa
120
aaggttttat ataatgccaa taaaaatgat gattatgaca acgaggagat cttaacctat
180
gaggaaatgt cactttatca tcagccagca aataggaaga gacctatcat cttgattggt
240
ccacagaact gtggccagaa tgaattgcgt cagaggctca tgaacaaaga aaaggaccgc
300
tttgcactctg cagttcctca tacaaccgag agtaggcgag accaagaagt agccggtaga
360
gattaccact ttgtttcgcg gcaagcattc gaggcagaca tagcagctgg aaagttcatt
420
gagcatggtg aatttgagaa gaatttgtat ggaactagca tagattctgt acggcaagtg
480
atcaactctg gcaaaaatatg tcttttaagt cttcgtacac agtcattgaa gactctccgg
540
aattcagatt tgaaaccata tattatcttc attgcacccc cttcacaaga aagacttcgg
600
gcattattgg ccaaagaagg caagaatcca aagcctgaag agttgagaga aatcattgag
660
aagacaagag agatggagca gaacaatggc cactactttg atacggcaat tgtgaattcc
720
gatcttgata aagcctatca ggaattgctt aggttaatta acaaacttga tactgaacct
780
cagtgggtac catccacttg gctgaggtga aagaaacatc cattctgtgg catgttggac
840
ttgatctggc aaaaactgcc aataggagga ctgcccagaca ctgcagcaag attgaggata
900

```

agatggaagg cagcagtata agctgtagat ctgttcttag atctcttgaa ttagtgagac
 960
 gacagttccc ttaggcagtt tgtgcatggc atcctttatt ctctatacat ggcttttagcg
 1020
 gttcttgctt ctttttggga ttctaaatgg aagctttcaa cagagcattc ctttttgtcc
 1080
 tgttaaaacc ttttgttttc acctaaaccc tttctgctta gttgtatctc tgtgaaaaac
 1140
 ttgtatacac aagcgtccat gtctcacaca aatattgatg tgattattct taagtgttaa
 1200
 atcattaaca cttaaatac ttcattggga atattgagca gagggactgt gcttctatgc
 1260
 actgggcaag gcagtatttg cttaggaaac taatttagtc atcagagata ctttcctaaa
 1320
 aaggaaaaat aaaaaacaaa atggtgccac tttgggttga agctactttg ttaggcttga
 1380
 attcatttat atgtcttttg attct
 1405

<210> 3370

<211> 269

<212> PRT

<213> Homo sapiens

<400> 3370

Leu	Val	Pro	Gly	Lys	Ser	Phe	Gln	Gln	Gln	Arg	Glu	Ala	Met	Lys	Gln	1	5	10	15
Thr	Ile	Glu	Glu	Asp	Lys	Glu	Gln	Lys	Asn	Gln	Glu	Asn	Cys	Gly	Ala	20	25	30	
Lys	Lys	Asn	Lys	Lys	Lys	Arg	Lys	Lys	Val	Leu	Tyr	Asn	Ala	Asn	Lys	35	40	45	
Asn	Asp	Asp	Tyr	Asp	Asn	Glu	Glu	Ile	Leu	Thr	Tyr	Glu	Glu	Met	Ser	50	55	60	
Leu	Tyr	His	Gln	Pro	Ala	Asn	Arg	Lys	Arg	Pro	Ile	Ile	Leu	Ile	Gly	65	70	75	80
Pro	Gln	Asn	Cys	Gly	Gln	Asn	Glu	Leu	Arg	Gln	Arg	Leu	Met	Asn	Lys	85	90	95	
Glu	Lys	Asp	Arg	Phe	Ala	Ser	Ala	Val	Pro	His	Thr	Thr	Arg	Ser	Arg	100	105	110	
Arg	Asp	Gln	Glu	Val	Ala	Gly	Arg	Asp	Tyr	His	Phe	Val	Ser	Arg	Gln	115	120	125	
Ala	Phe	Glu	Ala	Asp	Ile	Ala	Ala	Gly	Lys	Phe	Ile	Glu	His	Gly	Glu	130	135	140	
Phe	Glu	Lys	Asn	Leu	Tyr	Gly	Thr	Ser	Ile	Asp	Ser	Val	Arg	Gln	Val	145	150	155	160
Ile	Asn	Ser	Gly	Lys	Ile	Cys	Leu	Leu	Ser	Leu	Arg	Thr	Gln	Ser	Leu	165	170	175	
Lys	Thr	Leu	Arg	Asn	Ser	Asp	Leu	Lys	Pro	Tyr	Ile	Ile	Phe	Ile	Ala	180	185	190	
Pro	Pro	Ser	Gln	Glu	Arg	Leu	Arg	Ala	Leu	Leu	Ala	Lys	Glu	Gly	Lys	195	200	205	
Asn	Pro	Lys	Pro	Glu	Glu	Leu	Arg	Glu	Ile	Ile	Glu	Lys	Thr	Arg	Glu	210	215	220	
Met	Glu	Gln	Asn	Asn	Gly	His	Tyr	Phe	Asp	Thr	Ala	Ile	Val	Asn	Ser				

```

225                230                235                240
Asp Leu Asp Lys Ala Tyr Gln Glu Leu Leu Arg Leu Ile Asn Lys Leu
                245                250                255
Asp Thr Glu Pro Gln Trp Val Pro Ser Thr Trp Leu Arg
                260                265

```

<210> 3371
 <211> 790
 <212> DNA
 <213> Homo sapiens

```

<400> 3371
nnacgcgtag ccacaagacc gggtcggttt ctgggtgccc ttcccgcagg tgacgtgca
60
gacagaccag agactccagt caccctcgcc atctgtggaa tcatattctg gctgatcttt
120
ggtttcaaaa gtccggtggc ctggggctgt atgggtccac cccctggggg ggttgaggaa
180
gttgctgtcg tctgaggtac tgccgtacgt gtagtcctgg tcccgccttt tgccctggcc
240
aaagaagcac caagggagca tctggaccac caggctgcac accaaccctt cccagaccg
300
cgattccgac aagagacggg gcacccttca ttgcaaagag atttcccag atcctttctc
360
cttgatctac caaactttcc agatctttcc aaagctgata tcaatgggca gaatccaaat
420
atccaggtca ccatagaggt ggtcgacggt cctgactctg aagcagataa agatcagcat
480
ccggagaata agcccagctg gtcagtccca tcccccgact ggcgggcctg gtggcagagg
540
tccctgtcct tggccagggc aaacagcggg gaccaggact acaagtacga cagtacctca
600
gacgacagca acttcctcaa cccccccagg ggggtgggacc atacagcccc aggccaccgg
660
acttttgaaa ccaaagatca gccagaatat gattccacag atggcgaggg tgactggagt
720
ctctgggtctg tctgcagcgt cacctgcggg aacggcaacc agaaacggac cgggtcttgt
780
ggctacgct
790

```

<210> 3372
 <211> 198
 <212> PRT
 <213> Homo sapiens

```

<400> 3372
Gly Thr Ala Val Arg Val Val Leu Val Pro Ala Phe Ala Leu Ala Lys
1          5          10          15
Glu Ala Pro Arg Glu His Leu Asp His Gln Ala Ala His Gln Pro Phe
20          25          30
Pro Arg Pro Arg Phe Arg Gln Glu Thr Gly His Pro Ser Leu Gln Arg
35          40          45
Asp Phe Pro Arg Ser Phe Leu Leu Asp Leu Pro Asn Phe Pro Asp Leu

```

50	55	60
Ser Lys Ala Asp Ile Asn Gly Gln Asn Pro Asn Ile Gln Val Thr Ile		
65	70	75
Glu Val Val Asp Gly Pro Asp Ser Glu Ala Asp Lys Asp Gln His Pro		80
	85	90
Glu Asn Lys Pro Ser Trp Ser Val Pro Ser Pro Asp Trp Arg Ala Trp		95
	100	105
Trp Gln Arg Ser Leu Ser Leu Ala Arg Ala Asn Ser Gly Asp Gln Asp		110
	115	120
Tyr Lys Tyr Asp Ser Thr Ser Asp Asp Ser Asn Phe Leu Asn Pro Pro		125
	130	135
Arg Gly Trp Asp His Thr Ala Pro Gly His Arg Thr Phe Glu Thr Lys		140
145	150	155
Asp Gln Pro Glu Tyr Asp Ser Thr Asp Gly Glu Gly Asp Trp Ser Leu		160
	165	170
Trp Ser Val Cys Ser Val Thr Cys Gly Asn Gly Asn Gln Lys Arg Thr		175
	180	185
Arg Ser Cys Gly Tyr Ala		190
195		

<210> 3373

<211> 726

<212> DNA

<213> Homo sapiens

<400> 3373

tgtacatggt ttctctgggc tgacaggggc cctgcccctg gggcactgag ccctccctgt
 60
 gggtcctcga acagaagcca gggctctgtgc ggcacccacc agctgctggg ccatggcgga
 120
 gtgttctggt gcgggccagc gcctgaccgg tgcgggcggc ctcaggagag gagagcttgc
 180
 tcagtgcgtc acgtagtcag ggctcaggct ggggcccggc tccagagcct ggtcacattc
 240
 ccaagcttca ttctcttcac ctgtgaattg caggcttccc tgggtgtgcc tgcacatgag
 300
 ggaagacaca cctgaagcac tgggtccctc catggccttg ggccgcagga accgtgggag
 360
 cacgagcttg ggaaggacat gtcggaggcc ggcgcctgtg cgggcagaag ctgtgtcctc
 420
 cagcccttcc accaccagca tgttctcatt tccaggtttc tctgtttaaa aaacaaaagt
 480
 agcgcacatcgg tggctcttcac gacgtacacc cagaagcacc cgtccatcga ggacgggcct
 540
 ccgtttgtgg agccgctgct taacttcac tggttcctgc tgctggctgt ggacgggtgc
 600
 gtcttgggat cctgcagggg gagggggctg tgaatgtgcg gggtgtgtgt agacgtggtg
 660
 tggatagctg tgtgggtgtg tgtgcaagt tagccatggt gtgggtagcc gtgtgggtat
 720
 atgcat
 726

<210> 3374

<211> 84
 <212> PRT
 <213> Homo sapiens

<400> 3374
 Met Ser Glu Ala Gly Ala Cys Ala Gly Arg Ser Cys Val Leu Gln Pro
 1 5 10 15
 Phe His His Gln His Val Leu Ile Ser Arg Phe Leu Cys Leu Lys Asn
 20 25 30
 Lys Ser Ser Ala Ser Val Val Phe Thr Thr Tyr Thr Gln Lys His Pro
 35 40 45
 Ser Ile Glu Asp Gly Pro Pro Phe Val Glu Pro Leu Leu Asn Phe Ile
 50 55 60
 Trp Phe Leu Leu Leu Ala Val Asp Gly Cys Val Leu Gly Ser Cys Arg
 65 70 75 80
 Gly Arg Gly Leu

<210> 3375
 <211> 393
 <212> DNA
 <213> Homo sapiens

<400> 3375
 acgcgtgcat acgtgatctc atgtttgcac acatgtgtcc atgcagatgc atgctctcac
 60
 gcacatgtgc ccacacactc agcactcaca ccccgctctg caggctcagc cccactcctg
 120
 agccacctgc ctgggctttg gggggcccagc cggcatgggg agccccaggc tccagctggc
 180
 ctgcgttggc tctgaaatct aggccaggat gcagagcccc cagtgcggcc agtggagccc
 240
 ctggtactgt gcgcagcccc cacctggcag ccccttttcc tgtcaaagcc cctcccagcg
 300
 tcctctcccc accaggcaag ctaccgcgtt gaggcttagg acgttgcgcc ctctgtgtc
 360
 cttgcccagc atccccggcc tgcattctcac cag
 393

<210> 3376
 <211> 103
 <212> PRT
 <213> Homo sapiens

<400> 3376
 Met Phe Ala His Met Cys Pro Cys Arg Cys Met Leu Ser Arg Thr Cys
 1 5 10 15
 Ala His Thr Leu Ser Thr His Thr Pro Ser Cys Arg Leu Ser Pro Thr
 20 25 30
 Pro Glu Pro Pro Ala Trp Ala Leu Gly Ala Gln Pro Ala Trp Gly Ala
 35 40 45
 Pro Gly Ser Ser Trp Pro Arg Leu Ala Leu Lys Ser Arg Pro Gly Cys
 50 55 60
 Arg Ala Arg Ser Ala Ala Ser Gly Ala Pro Gly Thr Val Arg Ser Pro

65		70		75		80
His	Leu	Ala	Ala	Pro	Phe	Pro
				Val	Lys	Ala
				Pro	Pro	Ser
				Val	Leu	Ser
		85		90		95
Pro	Pro	Gly	Lys	Leu	Pro	Ala
		100				

<210> 3377
 <211> 5235
 <212> DNA
 <213> Homo sapiens

<400> 3377
 ngtcgacatc ttggtctccg gtcttgggcc tgtttaagaa tcctggcatc acgtgtggcg
 60
 aggacatggc tgatcagttt tctgacagaa gtgggtaaat ttccgcgttg gtaaatttcc
 120
 tgacaggaaa tttcggggaa ctaaaaaggc tggaagaaca tgaagatgga gcagtcataa
 180
 accaccact caaggaccat ctcttcacg accatccaca cgagactcag attgtctgaa
 240
 ttgagctatc gcaacttaat gctaaaagct ccttaaagct acagatttat gacatagttc
 300
 cttccaaaat attacatcat aaatcattga gaagattaaa aaaaaacact tgaagaaatt
 360
 gtagttttta acatctctgc atatattttg gatagctact aggttacttt aactgtcatt
 420
 aaggagcaca gacttactga agctttactg gacagaatcc tgggaaatcg atatcattat
 480
 aaggttatat ttcccagtta gcgggtgaag ggctggagac cttattgcag tcatggcttt
 540
 cacaaattac agcagtctga atcgagctca gctaaccctt gaatatctgc acacaaattc
 600
 gtaagtatcc tctaggtgcc actgaggtaa ccagtaactc gttccttgat attatatgga
 660
 aatcgtttcc ccagaaaatt ttgcttttcc actttttgag atgtatccca ctggagtga
 720
 atgtgtcact ggatatcttg agctctgtat tgaagaactg agatcagtga aatacttggt
 780
 gctaattccag aagaatctga tttttgttta ttggatcaaa attttctaaa tgcaaacttt
 840
 agttatttga agtcaatatg ttgagttggt tcattcaagt gtttatagga atccaacaaa
 900
 tactgtctta ttggatcgcc aaatgttgga ctattttagt atcaaccgtt tcccctctgt
 960
 agtgacaacg tcctaaacag ttaggtttat aacaagtgtt tactttctaa caagaaaaca
 1020
 gaagacattt aaatgacaac tttcaagaag aaaattttta ttttttcaga agttggcatt
 1080
 atcttcttgg cagattgctc acatccaata ttatttgtat atgctaaaca ggaaacggca
 1140
 acttgtttat atctctatct agatagtctt tccccaaaat ttccacagaa acatacagt
 1200
 ttcatgggtc ttgagttcat gaaggagtaa tctaactcact ccaacatggt ctggaatggt
 1260

tcaggttttaa tccatatgcc cactctcttg gaggetgtcc agtagcgtca aaacttttagt
1320
gttttaatac attcacctgt tacttttgag atgaagttca cctttcttgg atcacatgca
1380
aaggatgttt aggtctgtga agaaaagaat ttctaggccg ggtgctgtgg ctcacgcctg
1440
taatcccagc actttgggag gccgagaacc actcacgaat tcttgtttgg tgctcttgct
1500
gaactgggtg ataatgcaag agatgctgat gccaccagaa tagatattta tgcagaaaga
1560
cgagaggacc ttcgaggagg atttatgctt tgctttttgg atgatggagc aggaatggat
1620
ccaagtgatg ctgccagtgt gatccagttt gggaagtcgg ccaagcgaac acctgagtct
1680
actcagattg ggcagtacgg gaatgggtta aaatcgggct caatgcgcat tgggaaggat
1740
tttatcctgt tcaccaagaa ggaagacacc atgacctgcc tcttctgtc tcgcacgttt
1800
catgaggaag aaggcattga tgaagtgata gtccactgc ccacctggaa tgctcggacc
1860
cggaacctg tcacagacaa tgtagagaaa ttgcccattg agacagaact catctataag
1920
tactctccat tccgcactga ggaggaagtg atgaccctgt ttatgaagat tcctggggac
1980
agcggaacat tggatgatc cttcaatctc aaactcatgg ataatggaga gccagaacta
2040
gacataatct caaatccaag agatatccag atggcagaga cgtccccaga gggcacgaag
2100
ccagagcggc gctcgttccg tgcctatgcc gctgtgctct atattgatcc ccgatgagg
2160
atcttcatcc atgggcacaa ggtgcagacc aagaggctct cctgctgcct gtacaagccc
2220
aggatgtaca agtacacgtc aagccgtttc aagaccctg cgagcagga ggtgaggata
2280
gcagtgcacg tagcaaggat tgctgaagag aaggcgcggg aggcagagag caaagctcgg
2340
acattagaag tacgcctagg tggagacctc acgcgggact ccagggtgat gttgcgacag
2400
gtccagaaca gagccatcac tctgcgcaga gaagccgatg tcaagaagag gatcaaggag
2460
gccaagcagc gagcacttaa agaacctaa gaactgaatt ttgtttttgg tgtcaacatt
2520
gaacaccggg atctggatgg catgttcatc tacaactgta gccgactgat caaaatgtat
2580
gagaaagtgg gccacagct ggaagggggc atggcatgtg gcggggttgt tggggttgtt
2640
gatgtgccct acctggctct ggagcctaca cacaacaaac aggactttgc tgatgccaag
2700
gagtaccggc acctgctccg agcaatgggg gagcacctgg cgcagtattg gaaggatatt
2760
gccatcgccc agaggggaat catcaagttc tgggatgagt ttggctacct ctctgccaac
2820
tggaaccagc ccccgctccg tgagctgcgt taaaaacgcc ggagagctat ggaaatcccc
2880

accaccatcc agtgcgattt gtgtctgaaa tggagaaccc tccccttcca gctgagttct
2940
gtggaaaaag attaccctga cacctgggtt tgctccatga accctgatcc tgaacaggac
3000
cggtgtgagg cttctgaaca aaagcagaag gttcccctgg gaacattcag aaaggacatg
3060
aagacgcagg aagagaagca gaaacaactg acagagaaaa ttcgccagca gcaggagaag
3120
ctggaggccc ttcagaaaac cacacccatc cgctcccaag cagacctgaa gaaattgccc
3180
ttggaagtga ccaccagacc ttccactgag gaacctgtgc gtagacctca gcgtcctcgg
3240
tcgccccctt tacctgctgt gatcaggaac gccccagca gacccccctt tttgccaact
3300
cctagaccag ccagccagcc ccgaaaggct cctgtcatca gcagtacccc aaagctccct
3360
gctttggcag cccgggagga ggccagcaca tctaggctgc tccagccacc tgaggcacc
3420
cgaaagcctg ccaacactct cgtcaagact gcatcccgac ctgccccctt ggtgcagcaa
3480
ctgtcaccat ctttactgcc caactccaag agccctcggg aggttccttc tcccaaagtc
3540
atcaagactc cagtggtgaa gaagacagag tcacccatca aactctcccc ggctacccct
3600
agtcggaagc ggagtgtcgc agtttctgat gaggaagaag ttgaggagga agctgagagg
3660
aggaaggaga ggtgcaagcg gggcagattt gttgtgaagg aggaaaagaa ggactcgaat
3720
gagctctcag acagtgtctg gggagaggac tcggctgacc tcaagagagc tcagaaagat
3780
aaagggtgc acgtggaggt gcgtgtgaac agggagtggg acacgggccc tgtcacagcc
3840
gtggagggtg gcaagcatgt ggtgcggtgg aagggtgaagt ttgactacgt gcccacagac
3900
acgacaccaa gagaccgctg ggtggagaaa ggcagtgagg atgtgaggct gatgaaaccc
3960
ccttctccgg aacatcagag ccttgataca caacaggagg gcggggagga ggagggtggg
4020
cctgtggccc agcaggccat agctgtcgca gagccctcca cttccgaatg cctccgcatt
4080
gagcctgaca ccactgccct gagcaccaat cacgagacca tcgacctgct tgtccagatc
4140
ctccggaatt gtttacggta cttcctgcct ccaagtttcc ccatctccaa gaagcagctg
4200
agtgtatga attcagatga gctaatatct tttcctctga aggagtactt caagcaatat
4260
gaagtagggc tccaaaacct gtgcaattcc taccagagcc gtgctgactc ccgggccaag
4320
gcctccgagg aaagcctgcg cacctccgag aggaagctcc gcgagacgga ggagaagctg
4380
cagaagctga ggaccaacat cgtggcactc ctgcaaaaagg tgcaggagga catagacatc
4440
aacacagatg atgagctgga cgctacatt gaggacctca tcaccaaggg ggactgaagg
4500

caggagagag agcagctccc ctgccacact gcccctcaac cctgtagctg caggggggagg
 4560
 ggacttcatt catgggttgg tggctgcacc ttggtttgac ttacacggga catttggtgtt
 4620
 tttggaggaa aagataccct gattctttga atcttcctta agtttataaa tattttatttt
 4680
 ttaaaagaag atgctgtgcc tgtgagacca tacttttttt tttttttttt tttttttttt
 4740
 ttttttttgg tgactgcaaa ggacagagaa cctttccact ttggccatac tgggttgcta
 4800
 agccggagcc atttcagctc ctggctcctc aagataacgg cgagtccagt gccatcttgg
 4860
 agaagctcca ggggcagggc tgacttttct cctacaggag gaacaatgtg gggatctgag
 4920
 ggatgggagg gagacttccc cctagagtgg tggctctgct gggggctcat atccagggac
 4980
 ccaaaagggg ggctgtgtag gaggttccac attggagggg ctctctctct cgcagctgtc
 5040
 agagttgggtc ctggctgtgg cgtccaaaca gcttgagggg aaaagatcct gtctaaccac
 5100
 ctcatctact actcaagttc tttctgaagg agggatttct tcagttaacc atggacagtg
 5160
 aggtttctca ccacagtaac ttgggtccag gttgaggggg agacagatct gtggtaaadc
 5220
 tctgacttgg gcagc
 5235

<210> 3378

<211> 970

<212> PRT

<213> Homo sapiens

<400> 3378

Met	Leu	Cys	Phe	Leu	Asp	Asp	Gly	Ala	Gly	Met	Asp	Pro	Ser	Asp	Ala
1				5					10					15	
Ala	Ser	Val	Ile	Gln	Phe	Gly	Lys	Ser	Ala	Lys	Arg	Thr	Pro	Glu	Ser
			20					25					30		
Thr	Gln	Ile	Gly	Gln	Tyr	Gly	Asn	Gly	Leu	Lys	Ser	Gly	Ser	Met	Arg
		35					40					45			
Ile	Gly	Lys	Asp	Phe	Ile	Leu	Phe	Thr	Lys	Lys	Glu	Asp	Thr	Met	Thr
	50					55					60				
Cys	Leu	Phe	Leu	Ser	Arg	Thr	Phe	His	Glu	Glu	Glu	Gly	Ile	Asp	Glu
65					70					75				80	
Val	Ile	Val	Pro	Leu	Pro	Thr	Trp	Asn	Ala	Arg	Thr	Arg	Glu	Pro	Val
				85					90					95	
Thr	Asp	Asn	Val	Glu	Lys	Phe	Ala	Ile	Glu	Thr	Glu	Leu	Ile	Tyr	Lys
			100				105						110		
Tyr	Ser	Pro	Phe	Arg	Thr	Glu	Glu	Glu	Val	Met	Thr	Gln	Phe	Met	Lys
		115					120					125			
Ile	Pro	Gly	Asp	Ser	Gly	Thr	Leu	Val	Ile	Ile	Phe	Asn	Leu	Lys	Leu
	130					135					140				
Met	Asp	Asn	Gly	Glu	Pro	Glu	Leu	Asp	Ile	Ile	Ser	Asn	Pro	Arg	Asp
145					150					155				160	
Ile	Gln	Met	Ala	Glu	Thr	Ser	Pro	Glu	Gly	Thr	Lys	Pro	Glu	Arg	Arg

2558

595	600	605
Pro Glu Ala Pro Arg Lys	Pro Ala Asn Thr Leu Val	Lys Thr Ala Ser
610	615	620
Arg Pro Ala Pro Leu Val	Gln Gln Leu Ser Pro Ser	Leu Leu Pro Asn
625	630	635
Ser Lys Ser Pro Arg Glu Val	Pro Ser Pro Lys Val	Ile Lys Thr Pro
645	650	655
Val Val Lys Lys Thr Glu Ser	Pro Ile Lys Leu Ser Pro	Ala Thr Pro
660	665	670
Ser Arg Lys Arg Ser Val Ala	Val Ser Asp Glu Glu Glu	Val Glu Glu
675	680	685
Glu Ala Glu Arg Arg Lys Glu	Arg Cys Lys Arg Gly Arg	Phe Val Val
690	695	700
Lys Glu Glu Lys Lys Asp Ser	Asn Glu Leu Ser Asp Ser	Ala Gly Gly
705	710	715
Glu Asp Ser Ala Asp Leu Lys	Arg Ala Gln Lys Asp Lys	Gly Leu His
725	730	735
Val Glu Val Arg Val Asn Arg	Glu Trp Tyr Thr Gly Arg	Val Thr Ala
740	745	750
Val Glu Val Gly Lys His Val	Val Arg Trp Lys Val Lys	Phe Asp Tyr
755	760	765
Val Pro Thr Asp Thr Thr Pro	Arg Asp Arg Trp Val Glu	Lys Gly Ser
770	775	780
Glu Asp Val Arg Leu Met Lys	Pro Pro Ser Pro Glu His	Gln Ser Leu
785	790	795
Asp Thr Gln Gln Glu Gly Gly	Glu Glu Glu Val Gly Pro	Val Ala Gln
805	810	815
Gln Ala Ile Ala Val Ala Glu	Pro Ser Thr Ser Glu Cys	Leu Arg Ile
820	825	830
Glu Pro Asp Thr Thr Ala Leu	Ser Thr Asn His Glu Thr	Ile Asp Leu
835	840	845
Leu Val Gln Ile Leu Arg Asn	Cys Leu Arg Tyr Phe Leu	Pro Pro Ser
850	855	860
Phe Pro Ile Ser Lys Lys Gln	Leu Ser Ala Met Asn Ser	Asp Glu Leu
865	870	875
Ile Ser Phe Pro Leu Lys Glu	Tyr Phe Lys Gln Tyr Glu	Val Gly Leu
885	890	895
Gln Asn Leu Cys Asn Ser Tyr	Gln Ser Arg Ala Asp Ser	Arg Ala Lys
900	905	910
Ala Ser Glu Glu Ser Leu Arg	Thr Ser Glu Arg Lys Leu	Arg Glu Thr
915	920	925
Glu Glu Lys Leu Gln Lys Leu	Arg Thr Asn Ile Val Ala	Leu Leu Gln
930	935	940
Lys Val Gln Glu Asp Ile Asp	Ile Asn Thr Asp Asp Glu	Leu Asp Ala
945	950	955
Tyr Ile Glu Asp Leu Ile Thr	Lys Gly Asp	
965	970	

<210> 3379

<211> 898

<212> DNA

<213> Homo sapiens

<400> 3379

nagatctggg ctgaaacacg gttggtgctg atggccacag acagagggag cccagccctg
 60
 gtgggctcag ctaccttgac ggtgatggtc atcgacacca atggcaatcg cccaccatc
 120
 cccaaccct gggagctccg agtgtcagaa gatgcgttat tgggctcaga gattgcacag
 180
 gtaacagga atgatgtgga ctcaggaccc gtgctgtggt atgtgctaag cccatctggg
 240
 cccaggaac ccttcagtgt tggccgctat ggaggccgtg tctccctcac ggggcccctg
 300
 gactttgagc agtgtgaccg ctaccagctg cagctgctgg cacatgatgg gcctcatgag
 360
 ggccgtgcan acctcacagt gcttgtggag gatgtcaatg acaatgcacc tgccttctca
 420
 cagagcctct accaggtaat gctgcttgag cacacacccc caggcagtgc cattctctcc
 480
 gtctctgcca ctgatcggga ctcagggtgcc aacggtcaca tttcctacca cctggcttcc
 540
 cctgccgatg gcttcagtgt tgaccccaac aatgggaccc tgttcacaat agtgggaaca
 600
 ttggccttgg gccatgacgg gtcaggagca gtggatgtgg tgctggaagc acgagaccac
 660
 ggggctccag tccgggcagc acgagccaca gtgaacgtgc agctgcggga ccagaacgac
 720
 cacgccccga gcttcacatt gttccactac cgtgtggctg tgactgaaga cctgccccct
 780
 ggctccactc tgctaaccct ggaggctaca gatgctgatg gaagccgcag ccatgccgct
 840
 gtggattaca gcatcatcag tggcaactgg ggccgagtct tccagctgga acccaggc
 898

<210> 3380

<211> 299

<212> PRT

<213> Homo sapiens

<400> 3380

Xaa	Ile	Trp	Ala	Glu	Thr	Arg	Leu	Val	Leu	Met	Ala	Thr	Asp	Arg	Gly
1				5					10					15	
Ser	Pro	Ala	Leu	Val	Gly	Ser	Ala	Thr	Leu	Thr	Val	Met	Val	Ile	Asp
			20					25					30		
Thr	Asn	Gly	Asn	Arg	Pro	Thr	Ile	Pro	Gln	Pro	Trp	Glu	Leu	Arg	Val
		35					40					45			
Ser	Glu	Asp	Ala	Leu	Leu	Gly	Ser	Glu	Ile	Ala	Gln	Val	Thr	Gly	Asn
	50					55					60				
Asp	Val	Asp	Ser	Gly	Pro	Val	Leu	Trp	Tyr	Val	Leu	Ser	Pro	Ser	Gly
65					70				75					80	
Pro	Gln	Asp	Pro	Phe	Ser	Val	Gly	Arg	Tyr	Gly	Gly	Arg	Val	Ser	Leu
			85					90						95	
Thr	Gly	Pro	Leu	Asp	Phe	Glu	Gln	Cys	Asp	Arg	Tyr	Gln	Leu	Gln	Leu
		100						105					110		
Leu	Ala	His	Asp	Gly	Pro	His	Glu	Gly	Arg	Ala	Xaa	Leu	Thr	Val	Leu
		115					120					125			
Val	Glu	Asp	Val	Asn	Asp	Asn	Ala	Pro	Ala	Phe	Ser	Gln	Ser	Leu	Tyr

130		135		140
Gln Val Met Leu Leu Glu His Thr Pro Pro Gly Ser Ala Ile Leu Ser				
145		150		155
Val Ser Ala Thr Asp Arg Asp Ser Gly Ala Asn Gly His Ile Ser Tyr				160
	165		170	
His Leu Ala Ser Pro Ala Asp Gly Phe Ser Val Asp Pro Asn Asn Gly				175
	180		185	
Thr Leu Phe Thr Ile Val Gly Thr Leu Ala Leu Gly His Asp Gly Ser				190
	195		200	
Gly Ala Val Asp Val Val Leu Glu Ala Arg Asp His Gly Ala Pro Val				205
	210		215	
Arg Ala Ala Arg Ala Thr Val Asn Val Gln Leu Arg Asp Gln Asn Asp				220
225		230		235
His Ala Pro Ser Phe Thr Leu Phe His Tyr Arg Val Ala Val Thr Glu				240
	245		250	
Asp Leu Pro Pro Gly Ser Thr Leu Leu Thr Leu Glu Ala Thr Asp Ala				255
	260		265	
Asp Gly Ser Arg Ser His Ala Ala Val Asp Tyr Ser Ile Ile Ser Gly				270
	275		280	
Asn Trp Gly Arg Val Phe Gln Leu Glu Pro Arg				285
	290		295	

<210> 3381

<211> 1379

<212> DNA

<213> Homo sapiens

<400> 3381

```

ntgccgctcg tgtcagtcaa catggaggca gaggaatcgg agaaggccgc aacggagcaa
60
gagccgctgg aagggacaga acagacacta gatgcggagg aggagcagga ggaatccgaa
120
gaagcggcct gtggcagcaa gaaacgggta gtgccaggta ttgtgtacct gggccatata
180
ccgccgcgct tccggccccct gcacgtccgc aaccttctca ggccttatgg cgaggtcgga
240
cgcgtcttct ttcaggctga ggaccgggtc gtgagacgca agaagaaggc agcagcagct
300
gccggaggga aaaagcggtc ctacaccaag gactacaccg agggatgggt ggagttccgt
360
gacaagcgca tagccaagcg cgtggcggcc agtctacaca acacgcctat ggggtgccgc
420
aggcgcagcc ccttcogtta tgatctttgg aacctcaagt acttgacccg tttcacctgg
480
tcccacctca gcgagcacct cgcctttgag cgccagggtc gcaggcagcg cttgagagcg
540
gaggttgctc aagccaagcg tgagaccgac ttctatcttc aaagtgtgga acggggacaa
600
cgctttcttg cggccgatgg ggaccctgct cgcccagatg gctcctggac atttgccag
660
cgtcctactg agcaggaact gagggcccgt aaagcagcac ggccaggggg acgtgaacgg
720
gtcgcctgga caactgcccc ggacaaggcc cgtccaaca aagggtcctt ggccaggatc
780

```

tttggagccc cgccaccctc agagagcatg gagggacctt cccttgtcag ggactcctga
 840
 gggcctgggt ggcccccttc atttcttggc cctgctctgc ttctgtcta cctcatacta
 900
 gaatgatcgt gactaccgg gcagacattt tactgtgttt ctcagaccaa gtgtctactg
 960
 atggcccaaa catggagttt tgtgggcttc cactgtcccc actccgaact cctgtatgtg
 1020
 cctggctgag tcacctaatt catactgtca tactagcata attatgacta ttgcatatgc
 1080
 ttgttttgtt tgactcttgg ctgcctacgt ctgtagggtc ccctgaaaat ccacttcct
 1140
 gccccagaa agggccttta ttccaacta ggaggataat gcctagtcca ggcaatcttt
 1200
 ctctgttttag cagtcacagg tgagggtggt attagcatct tttttatgta gaaaaaattg
 1260
 agttaatggg gtggactggg ttgggaagaa atacatttcc taatgtattt atagaaaata
 1320
 aaaatatattt tatgtgaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 1379

<210> 3382

<211> 279

<212> PRT

<213> Homo sapiens

<400> 3382

Xaa	Pro	Leu	Val	Ser	Val	Asn	Met	Glu	Ala	Glu	Glu	Ser	Glu	Lys	Ala
1				5					10					15	
Ala	Thr	Glu	Gln	Glu	Pro	Leu	Glu	Gly	Thr	Glu	Gln	Thr	Leu	Asp	Ala
			20					25					30		
Glu	Glu	Glu	Gln	Glu	Glu	Ser	Glu	Glu	Ala	Ala	Cys	Gly	Ser	Lys	Lys
			35				40					45			
Arg	Val	Val	Pro	Gly	Ile	Val	Tyr	Leu	Gly	His	Ile	Pro	Pro	Arg	Phe
			50			55					60				
Arg	Pro	Leu	His	Val	Arg	Asn	Leu	Leu	Ser	Ala	Tyr	Gly	Glu	Val	Gly
65					70					75				80	
Arg	Val	Phe	Phe	Gln	Ala	Glu	Asp	Arg	Phe	Val	Arg	Arg	Lys	Lys	Lys
				85					90					95	
Ala	Ala	Ala	Ala	Ala	Gly	Gly	Lys	Lys	Arg	Ser	Tyr	Thr	Lys	Asp	Tyr
			100					105					110		
Thr	Glu	Gly	Trp	Val	Glu	Phe	Arg	Asp	Lys	Arg	Ile	Ala	Lys	Arg	Val
			115				120					125			
Ala	Ala	Ser	Leu	His	Asn	Thr	Pro	Met	Gly	Ala	Arg	Arg	Arg	Ser	Pro
			130			135					140				
Phe	Arg	Tyr	Asp	Leu	Trp	Asn	Leu	Lys	Tyr	Leu	His	Arg	Phe	Thr	Trp
145					150					155				160	
Ser	His	Leu	Ser	Glu	His	Leu	Ala	Phe	Glu	Arg	Gln	Val	Arg	Arg	Gln
				165					170					175	
Arg	Leu	Arg	Ala	Glu	Val	Ala	Gln	Ala	Lys	Arg	Glu	Thr	Asp	Phe	Tyr
			180				185						190		
Leu	Gln	Ser	Val	Glu	Arg	Gly	Gln	Arg	Phe	Leu	Ala	Ala	Asp	Gly	Asp
			195				200					205			
Pro	Ala	Arg	Pro	Asp	Gly	Ser	Trp	Thr	Phe	Ala	Gln	Arg	Pro	Thr	Glu

210		215		220
Gln Glu Leu Arg Ala	Arg Lys Ala Ala Arg	Pro Gly Gly Arg Glu Arg		
225	230	235	240	
Ala Arg Leu Ala Thr	Ala Gln Asp Lys Ala Arg	Ser Asn Lys Gly Leu		
	245	250	255	
Leu Ala Arg Ile Phe	Gly Ala Pro Pro Ser	Glu Ser Met Glu Gly		
	260	265	270	
Pro Ser Leu Val Arg	Asp Ser			
275				

<210> 3383
 <211> 309
 <212> DNA
 <213> Homo sapiens

<400> 3383
 ttttcttttc ctctgactgt agaacatgct tgctcatcat ggtagcaggg aaaaatgtca
 60
 gtgttgcttg cacacaaatt ttgtagctgg agtgagtatt gttgttattt gtgttatagg
 120
 aaatgctcac ttcttaacct cttttgtcct ggagcataga attactgcaa atgctcaccc
 180
 ctgggagctg tcttgcccc gatctccac acaaacactc cagcatgaaa gagcgagact
 240
 caatctcaaa aaaaaaaagt ttcgggcacc tgaacaggaa ctggtttcca tcatcaactc
 300
 agaaagccc
 309

<210> 3384
 <211> 94
 <212> PRT
 <213> Homo sapiens

<400> 3384	
Met Leu Ala His His Gly Ser Arg Glu Lys Cys Gln Cys Cys Leu His	
1 5 10 15	
Thr Asn Phe Val Ala Gly Val Ser Ile Val Val Ile Cys Val Ile Gly	
20 25 30	
Asn Ala His Phe Leu Thr Ser Phe Val Leu Glu His Arg Ile Thr Ala	
35 40 45	
Asn Ala His Pro Trp Glu Leu Ser Cys Pro Arg Ser Pro Thr Gln Thr	
50 55 60	
Leu Gln His Glu Arg Ala Arg Leu Asn Leu Lys Lys Lys Lys Phe Arg	
65 70 75 80	
Ala Pro Glu Gln Glu Leu Val Ser Ile Ile Asn Ser Glu Ser	
85 90	

<210> 3385
 <211> 720
 <212> DNA
 <213> Homo sapiens

<400> 3385

nncctaggag atgaagccgc cagcctgagc aagcctggca gatagacatg gccagacttg
 60
 gtaggggtga gccggcttgg ccagagggag gaggggtctat gctgaggtct actgatggta
 120
 gtgaaaacag tgacggtgcg ggggtgggga gcactgcggt ccacttcttc agccccccac
 180
 tatectggaa gcttcagggg gggcccgagg cagcctccag cttcagcgac caccctgtt
 240
 cctcttgcca gggtctttgt gaacttcccc tcggccaagc agtacttcag ccagttcaag
 300
 cacatggagg atccccctgga gatggagcgg agcccccagc tgcggaagca cgcctgccga
 360
 gtcatggggg ccctcaacac tgctgtggag aacctgcatg accccgacaa ggtgtcctct
 420
 gtgctcgccc ttgtggggaa agcccacgcc ctcaagcaca aggtggaacc ggtgtacttc
 480
 aagatcctct ctgggggtcat tctggaggtg gtgcgcgagg aatttgccag tgacttccca
 540
 cctgagacgc agagagcctg ggccaagctg cgtggcctca tctacagcca cgtgaccgct
 600
 gcctacaagg aagtgggctg ggtgcagcag gtccccaacg ccaccacccc accggccaca
 660
 ctgccctctt cggggccgta ggaccctcc ctccaccccc ctccctggca gcacctcgag
 720

<210> 3386

<211> 188

<212> PRT

<213> Homo sapiens

<400> 3386

Met	Val	Val	Lys	Thr	Val	Thr	Val	Arg	Gly	Trp	Gly	Ala	Leu	Arg	Ser
1			5						10					15	
Thr	Ser	Ser	Ala	Pro	His	Tyr	Pro	Gly	Ser	Phe	Arg	Val	Gly	Pro	Arg
			20					25					30		
Gln	Pro	Pro	Ala	Ser	Ala	Thr	Thr	Pro	Val	Pro	Leu	Ala	Arg	Phe	Phe
			35				40					45			
Val	Asn	Phe	Pro	Ser	Ala	Lys	Gln	Tyr	Phe	Ser	Gln	Phe	Lys	His	Met
	50					55					60				
Glu	Asp	Pro	Leu	Glu	Met	Glu	Arg	Ser	Pro	Gln	Leu	Arg	Lys	His	Ala
65					70					75				80	
Cys	Arg	Val	Met	Gly	Ala	Leu	Asn	Thr	Val	Val	Glu	Asn	Leu	His	Asp
				85					90					95	
Pro	Asp	Lys	Val	Ser	Ser	Val	Leu	Ala	Leu	Val	Gly	Lys	Ala	His	Ala
			100					105					110		
Leu	Lys	His	Lys	Val	Glu	Pro	Val	Tyr	Phe	Lys	Ile	Leu	Ser	Gly	Val
		115					120					125			
Ile	Leu	Glu	Val	Val	Ala	Glu	Glu	Phe	Ala	Ser	Asp	Phe	Pro	Pro	Glu
	130					135					140				
Thr	Gln	Arg	Ala	Trp	Ala	Lys	Leu	Arg	Gly	Leu	Ile	Tyr	Ser	His	Val
145					150					155				160	
Thr	Ala	Ala	Tyr	Lys	Glu	Val	Gly	Trp	Val	Gln	Gln	Val	Pro	Asn	Ala
				165					170					175	
Thr	Thr	Pro	Pro	Ala	Thr	Leu	Pro	Ser	Ser	Gly	Pro				

180

185

<210> 3387

<211> 3299

<212> DNA

<213> Homo sapiens

<400> 3387

nacgcgtgaa ggggaagcag gcacgtccgg aagcgctcct ccagcagga cagctcactg
60
atgaggtcgg tgatggcggt ggtaaaggct tcctgggggt ttgccccgcc ggagtaatcc
120
ggaagaggcc tcttattagg gctctggtgg cggcggcggc ggacccttgg ggtctggacg
180
caacggcggc gggagcatga acgccccctc agccttcgag tcgttcttgc tcttcgaggg
240
cgagaagaag taagtgcgc cggctgcggc gggccgagga tcaccattaa caaggacacc
300
aaggtaccca atgcctgttt attcaccatc aacaaagaag accacacact gggaaacatc
360
attaaatcac aactcctaaa agaccgcga gtgctatttg ctggctacaa agtccccac
420
cccttgagc acaagatcat catccgagtg cagaccacgc cggactacag cccccaggaa
480
gcctttacca acgccatcac cgacctcatc agtgagctgt ccctgctgga ggagcgcttt
540
cgggtggcca taaaagacaa gcaggaagga attgagtagg ggccagaggg ggctctgctc
600
ggcctgtgag ccccgttcct acctgtgect gaccctccgc tccaggtacc acaccgagga
660
gagcggccgg tcccagccat ggcgcgcctt gtggccaccc ctcaccctga caccgacgtg
720
ttggccaccc ctcaccctga caccgacgtg tcctgtacat agattagggt ttatattcct
780
aataaagtat agcgggaagag acctggatgt ggacttgagc agcggtgact tcgcaagcaa
840
atggattgtc aggcttgatg caggcagatg acctgtttca ggggcgtccg gctggcaggg
900
atgaattcat tctggaccaa agatccgggg tccaggggct gctgcggggg ctgtgctgag
960
ccggagagaa gtgtgcaaac ccatgagctc ccaagagtct ctgctctaga agcctcaact
1020
cctgggcctg cctgtcagtc aaagcaggaa cacttcttcc tgcataactc gaaacacctt
1080
tccacaggct tcttgccac agtagagttt aataaaaata ttactgaaa gacccccccc
1140
acccccatcg gcccaaagct gaataagtta gtagctgtg tcctgggtcc tttgcgatgg
1200
tgtgaggcta catcctcccc cagatggcta cgatgttga gtccgtcagg gcggtgaggt
1260
aggtgaagga ggcattggcc accactgtgt tcaccatggt cttggtcacc acctggccaa
1320
gggcccaggg ctggggccac ttcaggatct gtgtgggggc ctgcagggt gccggcagca
1380

2565

ggggtggctg cttcaggatg ttgctgacgt cgtagagcca cacgttgccc tctcatccc
1440
cacagagcac aatccccctta tcagggcagg cgctgagcga gaagtaggcc aactcgggtgg
1500
acgaccattg cagccgcgcc aggaccacca ctgccactgt ggactggctg ccccggtccc
1560
cccacgtctg cctccagctc cacaggcaga tggtgcccag gccgtcccc ttggaggcca
1620
cgatgtctc attcacaat gccagcccat cactctccg tccagatgcc tcggagccct
1680
cagagaagac gaattccact tcacacacc tctcttttg gggctggctc agccgcacgt
1740
cccagcagca gcagccgcc tcgcagccgg ccagcaggcg gccgtccggg caggaggcga
1800
cagggcagag gcgcagggg atagaggtgg tgtccagtgt gagcagctgg ctggcctgga
1860
attcgtagtc ctggttgggc acccgcagtgt cccagaggat gatccgcttg tcataggagg
1920
ccgtgaagag atgggtctcg tgggcggggc tgaagcacag ggtggcgatg gccttcttgt
1980
gggctcggat gacccgcag cagaagccgg cacgcacgtg cagcagccgg accaggcccc
2040
gtaggcctgc agccgccagc aactccagc gcttcttgtg gccagcctgt gtgaccacca
2100
tcagagcggc ccaggccaca gaaaagaact cctcgccggg tgcctgtac ttgtggagca
2160
cgatgcccgt ctggcaatca attacgcaca cagcctccc gccgcacgtg gccacggtct
2220
gggatgtggc cccctcctcc caggccggct cgaaggcaca ggcccacagc tgggtctcga
2280
ggtcctgggg gctgtgttc ttgctgtggc actgcaggaa gtgcaggggc tccagcttca
2340
cagcaggctg gctgccatcg gagcctgcc cagggtgccc ctccacctgg gccgacgggg
2400
aggcacacgc ccgcttgctg ggagaaaggc tgagtgggac gtcgtctggc cgtttcaagg
2460
ccgccagtct ggccctgggc ttgtgggcag ctccagcttc tgggggcttc tctgggctgt
2520
tagccttttg cacctgggtc ctactggcgg ccaccagctc ctccagagatc atccgcacc
2580
gccactgggt gaactcgctg agggactcgg gcccgtagcg gacatccctg acagccgact
2640
tcacaaagtc cgcctgggcc ttctcagcct cctcttcagg acccagtgtg gccatgaact
2700
tctcccagtg agctgtgacc ctgctgggtc gctcccatt cagggttctc acctgagagt
2760
aagttgagga cgcaccttg ccattgacct tacggagcgt gggcaggaga aaggagactt
2820
tcaggttgtc attgaccgtc aggaaggggt tgccctccag gctgagttcc tcgagcttgg
2880
ggaactggca caaggcagta acatccccca gctggttgtt ggcgacggc aggcacgcga
2940
ggtgggacag gccaggttg tccggcagcg tctccaggtg gttgttagac aggtcaagct
3000

cctgcagctg cgtcaggcgg cacaggagtt tgggggtccag gtgctcggaa agcagctcca
 3060
 atcctgacag gtccagactc cggatcttcc ccagccggtc gctcttgggg cgccccgcgt
 3120
 gcattagcag ccgcgccgag agggggccca tggcgaggag gcgcagcccc cgctgaccca
 3180
 gtcggccacc ccggcgtgtg gcgtcgccct gcgtctcttg gagcccgga ctggcgctccg
 3240
 cggtaactga gcccaggagg cggcgccgcg cgagcccgtg ggcgttaacg accggaagg
 3299

<210> 3388

<211> 153

<212> PRT

<213> Homo sapiens

<400> 3388

Ser	Gly	Arg	Gly	Leu	Leu	Leu	Gly	Leu	Trp	Trp	Arg	Arg	Arg	Arg	Thr
1				5				10						15	
Leu	Gly	Val	Trp	Thr	Gln	Arg	Arg	Arg	Glu	His	Glu	Arg	Pro	Ser	Ser
		20						25					30		
Leu	Arg	Val	Val	Leu	Ala	Leu	Arg	Gly	Arg	Glu	Glu	Val	Ser	Asp	Ala
		35						40				45			
Gly	Cys	Gly	Gly	Pro	Arg	Ile	Thr	Ile	Asn	Lys	Asp	Thr	Lys	Val	Pro
50						55					60				
Asn	Ala	Cys	Leu	Phe	Thr	Ile	Asn	Lys	Glu	Asp	His	Thr	Leu	Gly	Asn
65					70					75				80	
Ile	Ile	Lys	Ser	Gln	Leu	Leu	Lys	Asp	Pro	Gln	Val	Leu	Phe	Ala	Gly
				85					90					95	
Tyr	Lys	Val	Pro	His	Pro	Leu	Glu	His	Lys	Ile	Ile	Ile	Arg	Val	Gln
			100					105					110		
Thr	Thr	Pro	Asp	Tyr	Ser	Pro	Gln	Glu	Ala	Phe	Thr	Asn	Ala	Ile	Thr
		115					120					125			
Asp	Leu	Ile	Ser	Glu	Leu	Ser	Leu	Leu	Glu	Glu	Arg	Phe	Arg	Val	Ala
	130					135					140				
Ile	Lys	Asp	Lys	Gln	Glu	Gly	Ile	Glu							
145						150									

<210> 3389

<211> 308

<212> DNA

<213> Homo sapiens

<400> 3389

nntgtctcca agcccttcca ccaccagcat gttctcatTT ccaggtttct ctgtttaaaa
 60
 aacaaaagta gcgcatcggt ggtcttcacg acgtacaccc agaagcacc gcctcatcgag
 120
 gacgggcctc cgtttTgtgga gccgctgctt aacttcatct ggTtctgct gctggctgtg
 180
 gacggggaac cttctgacca gcctcatggg ctctcagag caggaggatg gggaggagag
 240
 cccagcgac ggcagcccca tcgagctgga ctgaactggc caggccacgt ggagacacca
 300

cggtcgac
308

<210> 3390
<211> 102
<212> PRT
<213> Homo sapiens

<400> 3390
Xaa Val Ser Lys Pro Phe His His Gln His Val Leu Ile Ser Arg Phe
1 5 10 15
Leu Cys Leu Lys Asn Lys Ser Ser Ala Ser Val Val Phe Thr Thr Tyr
20 25 30
Thr Gln Lys His Pro Ser Ile Glu Asp Gly Pro Pro Phe Val Glu Pro
35 40 45
Leu Leu Asn Phe Ile Trp Phe Leu Leu Leu Ala Val Asp Gly Glu Pro
50 55 60
Ser Asp Gln Pro His Gly Leu Leu Arg Ala Gly Gly Trp Gly Gly Glu
65 70 75 80
Pro Gln Arg Arg Gln Pro His Arg Ala Gly Leu Asn Trp Pro Gly His
85 90 95
Val Glu Thr Pro Arg Ser
100

<210> 3391
<211> 1295
<212> DNA
<213> Homo sapiens

<400> 3391
atcgctctttt tactttatctt agaaacctgt ttggagggtta tggatgataa acccaatcct
60
gaagccctaa gtgacagttc agagcgtctt ttctcctttg gcgtcatcgc agatgttcaa
120
tttgacagact tagaagatgg ctttaatttc caaggaacca ggcggcgata ctacagacat
180
agtcttcttc acttacaggg tgccattgaa gactggaata atgaaagcag catgccctgt
240
tgtgtccttc agcttggaga tatcatcgat ggatataatg cacagtataa tgcattccaaa
300
aagtccttag aacttggtat ggacatgttc aagaggctta aagttccagt tcatcataca
360
tggggaaacc atgaattcta taacttcagt agagagtatt taacacactc taaacttaac
420
actaagtttc tagaagatca gattgtacat catcctgaga ccatgccttc agaagattat
480
tatgcttatac attttgtacc attccctaaa ttccggttca ttttacttga tgcatatgac
540
ttgagtgtct tgggcgtgga tcagtcttct ccaaaatacg agcagtgtat gaagatattg
600
agggagcaca atccaaatac ggaactgaat agtcctcaag gactttctga gccccagttt
660
gtccagttta atggaggatt cagccaagaa cagctaaact ggttgaatga agtgctaaca
720

ttctctgaca caaaccaaga aaaggtggtg attgtgagcc atcttcccat ttaccggac
 780
 gcctctgaca atgtgtgcct ggcttgaac tacagagatg ccttggcagt catttggctc
 840
 catgagtgtg tgggtgtgtt ctttgcctggc cacacccatg atgggtggcta ctctgaggat
 900
 ccttttgggtg tataccacgt caacctagaa ggagttattg aaacagctcc agacagccaa
 960
 gcctttggca cagttcatgt ctatcctgac aaaatgatgt tgaaagggag aggcagagtt
 1020
 ccagatagaa ttatgaatta caagaaagaa agagccttcc attgtagtc taatttattt
 1080
 taacttgata gaaaatgagc tttgtgtttg tccctcctaa acaaaaaaat aaaaatcctc
 1140
 tgtctcattg ttagtatctc agcttgcata acaaaatgta tttatagttt cagtgtgtga
 1200
 tggttgataa aatactcaga aatgttattt tggatcatgt atccattgta agttagaaac
 1260
 aaaccagggg ggaactgag gcaggggtgt atagt
 1295

<210> 3392

<211> 355

<212> PRT

<213> Homo sapiens

<400> 3392

Ile	Val	Phe	Leu	Leu	Tyr	Leu	Glu	Thr	Cys	Leu	Glu	Val	Met	Asp	Asp	1	5	10	15
Lys	Pro	Asn	Pro	Glu	Ala	Leu	Ser	Asp	Ser	Ser	Glu	Arg	Leu	Phe	Ser	20	25	30	
Phe	Gly	Val	Ile	Ala	Asp	Val	Gln	Phe	Ala	Asp	Leu	Glu	Asp	Gly	Phe	35	40	45	
Asn	Phe	Gln	Gly	Thr	Arg	Arg	Arg	Tyr	Tyr	Arg	His	Ser	Leu	Leu	His	50	55	60	
Leu	Gln	Gly	Ala	Ile	Glu	Asp	Trp	Asn	Asn	Glu	Ser	Ser	Met	Pro	Cys	65	70	75	80
Cys	Val	Leu	Gln	Leu	Gly	Asp	Ile	Ile	Asp	Gly	Tyr	Asn	Ala	Gln	Tyr	85	90	95	
Asn	Ala	Ser	Lys	Lys	Ser	Leu	Glu	Leu	Val	Met	Asp	Met	Phe	Lys	Arg	100	105	110	
Leu	Lys	Val	Pro	Val	His	His	Thr	Trp	Gly	Asn	His	Glu	Phe	Tyr	Asn	115	120	125	
Phe	Ser	Arg	Glu	Tyr	Leu	Thr	His	Ser	Lys	Leu	Asn	Thr	Lys	Phe	Leu	130	135	140	
Glu	Asp	Gln	Ile	Val	His	His	Pro	Glu	Thr	Met	Pro	Ser	Glu	Asp	Tyr	145	150	155	160
Tyr	Ala	Tyr	His	Phe	Val	Pro	Phe	Pro	Lys	Phe	Arg	Phe	Ile	Leu	Leu	165	170	175	
Asp	Ala	Tyr	Asp	Leu	Ser	Val	Leu	Gly	Val	Asp	Gln	Ser	Ser	Pro	Lys	180	185	190	
Tyr	Glu	Gln	Cys	Met	Lys	Ile	Leu	Arg	Glu	His	Asn	Pro	Asn	Thr	Glu	195	200	205	
Leu	Asn	Ser	Pro	Gln	Gly	Leu	Ser	Glu	Pro	Gln	Phe	Val	Gln	Phe	Asn				

210	215	220
Gly Gly Phe Ser Gln Glu Gln Leu Asn Trp Leu Asn Glu Val Leu Thr		
225	230	235
Phe Ser Asp Thr Asn Gln Glu Lys Val Val Ile Val Ser His Leu Pro		240
	245	250
Ile Tyr Pro Asp Ala Ser Asp Asn Val Cys Leu Ala Trp Asn Tyr Arg		255
	260	265
Asp Ala Leu Ala Val Ile Trp Ser His Glu Cys Val Val Cys Phe Phe		270
	275	280
Ala Gly His Thr His Asp Gly Tyr Ser Glu Asp Pro Phe Gly Val		285
	290	295
Tyr His Val Asn Leu Glu Gly Val Ile Glu Thr Ala Pro Asp Ser Gln		300
305	310	315
Ala Phe Gly Thr Val His Val Tyr Pro Asp Lys Met Met Leu Lys Gly		320
	325	330
Arg Gly Arg Val Pro Asp Arg Ile Met Asn Tyr Lys Lys Glu Arg Ala		335
	340	345
Phe His Cys		350
355		

<210> 3393
 <211> 510
 <212> DNA
 <213> Homo sapiens

<400> 3393
 nngcgactct gggacccctt gggctcgtggc agcagtgggc gcgatgtttg tcggctcggg
 60
 atgggtccag ganntgttac tccttcttct tttgttgggg tctgggcagg ggccacagca
 120
 agtcggggcg ggtcaaactt cgagtacttg aaacggggagc actcgctgtc gaagccctac
 180
 cagggtgtgg gcacaggcag ttcctcactg tggaatctga tgggcaatng catggtgatg
 240
 acccagtata tccgccttac cccagatatg caaagtaaac aggggtgcctt gtggaaccgg
 300
 gtgccatgtt tcctgagaga ctgggagttg caggtgcact tcaaaatcca tggacaagga
 360
 aagaagaatc tgcattggga tggcttgga atctggtaca caaaggatcg gatgcagcca
 420
 gggcctgtgt ttggaacat ggacaaattt gtggggctgg gaggatattgt agacacctac
 480
 cccaatgagg agaagcagcc cttcacgcgt
 510

<210> 3394
 <211> 170
 <212> PRT
 <213> Homo sapiens

<400> 3394
 Xaa Arg Leu Trp Asp Pro Leu Gly Arg Gly Ser Ser Gly Gly Asp Val
 1 5 10 15
 Cys Arg Leu Gly Met Gly Pro Gly Xaa Val Thr Pro Ser Ser Phe Val


```
<400> 3395
ntggcactta acggtggttg ctggttctgc gccggatccg ggagaggggc gggcgccatt
60
gtgcttcgct gccgactgca tttcctcagt cacgggccta gaactccaag gagaaaggcg
120
gcggtgcggtg ttgctgcgag tgggacgcgc actggtcggt gccggctcag gagccgggaa
180
aaatcttttaa gaatggagtc taaaccttca aggattccaa gaagaatttc tgttcaacct
240
tccagctcct taagtgctag gatgatgtct ggaagcagag gaagtagttt aaatgatacc
300
tatcactcaa gagactcttc atttagattg gattctgaat atcagtctac atcagcatca
360
gcatctgcgt caccatttca atctgcatgg tatagtgaat ctgagataac tcagggagca
420
cgctcaagat cgcagaacca gcaacgggat catgattcaa aaagacctaa actttctctgt
480
acaaactgta ctacctcagc tgggagaaat gttggaaatg gtttaaacac attatcagat
540
tcatcttgga ggcatagtca agttcctaga tcttcatcaa tgg tacttgg atcatttgg
600
acagacttaa tgagagagag gagagatttg gagagaagaa cagattcctc tattagtaat
660
cttatggatt atagtcaccg aagtgggtgat ttcacaaact catcatatgt tcaagacaga
720
gttctcttcat attcacaagg agcaagacca aaagaaaact caatgagcac ttacagttg
780
aatacatcat ccacaaacca ccaattg
807
```

<210> 3396
 <211> 205
 <212> PRT
 <213> Homo sapiens

<400> 3396
 Met Glu Ser Lys Pro Ser Arg Ile Pro Arg Arg Ile Ser Val Gln Pro
 1 5 10 15
 Ser Ser Ser Leu Ser Ala Arg Met Met Ser Gly Ser Arg Gly Ser Ser
 20 25 30
 Leu Asn Asp Thr Tyr His Ser Arg Asp Ser Ser Phe Arg Leu Asp Ser
 35 40 45
 Glu Tyr Gln Ser Thr Ser Ala Ser Ala Ser Ala Ser Pro Phe Gln Ser
 50 55 60
 Ala Trp Tyr Ser Glu Ser Glu Ile Thr Gln Gly Ala Arg Ser Arg Ser
 65 70 75 80
 Gln Asn Gln Gln Arg Asp His Asp Ser Lys Arg Pro Lys Leu Ser Cys
 85 90 95
 Thr Asn Cys Thr Thr Ser Ala Gly Arg Asn Val Gly Asn Gly Leu Asn
 100 105 110
 Thr Leu Ser Asp Ser Ser Trp Arg His Ser Gln Val Pro Arg Ser Ser
 115 120 125
 Ser Met Val Leu Gly Ser Phe Gly Thr Asp Leu Met Arg Glu Arg Arg
 130 135 140
 Asp Leu Glu Arg Arg Thr Asp Ser Ser Ile Ser Asn Leu Met Asp Tyr
 145 150 155 160
 Ser His Arg Ser Gly Asp Phe Thr Thr Ser Ser Tyr Val Gln Asp Arg
 165 170 175
 Val Pro Ser Tyr Ser Gln Gly Ala Arg Pro Lys Glu Asn Ser Met Ser
 180 185 190
 Thr Leu Gln Leu Asn Thr Ser Ser Thr Asn His Gln Leu
 195 200 205

<210> 3397
 <211> 492
 <212> DNA
 <213> Homo sapiens

<400> 3397
 ggcccagctt gccagggggc ccgggagagc agctacatgg agatgaaagg ccctccctca
 60
 ggatctcccc ccaggcagcc tcctcagttc tgggacagcc agaggcggcg gcaaccccag
 120
 ccacagagag acagtggcac ctacgagcag cccagccccc tgatccatga ccgagactct
 180
 gtgggctccc agccccctct gcctccgggc ctaccccccg gccactatga ctcacccaag
 240
 aacagccaca tccctggaca ttatgacttg cctccagtac ggcacccccc atcacctcan
 300
 cttcgacgcc aggatcgttg aggagccagg atggtatggc agaggcagca anacctggct
 360
 gttgctgctc aaggctgggg acagagcata gtgtaccctt gccaggagca gggagtggac
 420

cggcaggctg tgaacatgaa caacgcttaa cagagcaagt gatgggagaa taattcatgg
 480
 cttctacat gg
 492

<210> 3398
 <211> 163
 <212> PRT
 <213> Homo sapiens

<400> 3398
 Met Val Glu Ala Met Asn Tyr Ser Pro Ile Thr Cys Ser Val Lys Arg
 1 5 10 15
 Cys Ser Cys Ser Gln Pro Ala Gly Pro Leu Pro Ala Pro Gly Arg Gly
 20 25 30
 Thr Leu Cys Ser Val Pro Ser Leu Glu Gln Gln Gln Pro Gly Xaa Ala
 35 40 45
 Ala Ser Ala Ile Pro Ser Trp Leu Leu Asn Asp Pro Gly Val Glu Xaa
 50 55 60
 Glu Val Met Gly Asp Ala Val Leu Glu Ala Ser His Asn Val Gln Gly
 65 70 75 80
 Cys Gly Cys Ser Trp Val Ser His Ser Gly Arg Gly Val Gly Pro Glu
 85 90 95
 Ala Glu Gly Ala Gly Ser Pro Gln Ser Leu Gly His Gly Ser Gly Gly
 100 105 110
 Trp Ala Ala Arg Arg Cys His Cys Leu Ser Val Ala Gly Val Ala Ala
 115 120 125
 Ala Ser Gly Cys Pro Arg Thr Glu Glu Ala Ala Trp Gly Glu Ile Leu
 130 135 140
 Arg Glu Gly Leu Ser Ser Pro Cys Ser Cys Ser Pro Gly Pro Pro Gly
 145 150 155 160
 Lys Leu Gly

<210> 3399
 <211> 5784
 <212> DNA
 <213> Homo sapiens

<400> 3399
 nnatggaatc acagcggcag cggcggctgc ggcgcgcgcg agccgagtgt gagcggaaag
 60
 gggcccggcg tctgcctcga gactgaagac cgataaactc aagccatgga gggattactg
 120
 cattacatca accctgcaca cgccatttct ctcctaagtg ccctgaatga ggagcgtctc
 180
 aaaggacagc tgtgtgatgt gctgctgatt gttggagacc aaaagtccg agctcataaa
 240
 aacgtcttgg ctgccagcag cgaatacttt cagagtttat tcacaaataa ggaaaatgag
 300
 tcacaaactg tatttcagct tgacttctgt gagccagatg cttttgataa tgttttaaac
 360
 tacatttatt cttcctctct atttggtgag aagagcagcc ttgctgctgt gcaagaactt
 420

ggctatagtc ttgggatttc ctttctgact aacatcgttt ctaaaacacc tcaagccccc
480
tttccaacgt gtcctaatag aaaaaaagtg tttgtagaag atgatgaaaa cagttctcaa
540
aagagaagtg tcattgtttg tcaaagtaga aacgaagcac aaggaaaaac tgttagtcaa
600
aatcaacccg atgtaagcca tacttcccg ccctctccta gcattgcagt caaggccaat
660
accaataagc cacatgtccc aaaaccaata gaaccacttc ataatttgtc attaactgaa
720
aagagttggc cgaaagatag ttctgtggta tatgcaaagt ctcttgagca ttctggatct
780
ttggatgac ctaatagaat cagtttgggtg aaaagaaatg cagtgttgcc ttcaaagcct
840
ctgcaagaca gagaagctat ggatgataaa ccagggtgtga gtggtcagct tccaaaagga
900
aaagctctag agctggcttt gaagagacca cggccacctg ttttgtctgt ttgtagctca
960
tcagagactc cctatctatt aaaagaaact aacaaaggaa atgggtcaagg tgaagataga
1020
aacttgttgt actattcaaa gttaggctta gtgatcccat ccagtggatc tggttctgga
1080
aaccaaagca ttgacaggag tggcccactt gttaagagtc tcctcagacg gtcattgtcg
1140
atggatagcc aggttcctgt ctattcacct tccatagatt tgaaatcttc ccagggatca
1200
tcttcggtgt ccagtgatgc accagggaaat gtgttggtg ctttatctca gaagtcact
1260
ttaaagatt gtagtgaaaa aacagcccta gatgacaggc ctcaagtgt acaaccgcat
1320
cgctcaggt ccttttagtgc ttctcagtca acagacaggg agggagcttc cctgtgact
1380
gaggtgcgca taaagactga gccagcagc ccgctgtcgg acccctcgga catcatccgc
1440
gtcactgtgg gagatgcggc aacaacagca gctgcctcat cttcgtcggc cacaagagac
1500
ctgtctctga aaacagaaga tgacaaaaa gacatgagca gactcccagc aaaaaggagg
1560
ttccaagcgg accgaagatt gccgtttaag aagttaaagg tgaatgagca cgggtctcct
1620
gtgtcagaag ataattttga ggaaggctca agccctactc tccttgatgc agattttcca
1680
gattctgatt tgaataaaga cgaatttggt gagttggagg ggacgagacc aaacaaaaa
1740
tttaaagca aacattgcct taagatcttt agatcaacag caggtcttca ccgtcatgtt
1800
aacatgtacc ataaccaga aaagccctac gcttgtgaca tctgtcacia gaggtttcac
1860
accaacttca aagtgtggac aactgtcag acccaacacg gcatagtga gaacccatca
1920
ccagcctcta gttcacatgc tgttttggat gaaaaattcc aaagaaagct gattgacata
1980
gtgagagaga gagaaattaa gaaggccctg atcattaagt taaggcgcgg caagcctggg
2040

tttcagggac agagtagctc ccaagcacag caagtcacatca agaggaactt gagatctcga
2100
gccaaaggag cttacatttg tacttactgc ggaaaagcgt accgctttct ctctcaattt
2160
aagcagcata taaaaatgca tccaggagaa aaacccttg gagtaaataa agttgctaaa
2220
ccaaaagagc atgctcctct tgcaagtcca gtagaaaaca aggaggttta ccagtgccgc
2280
ctctgtaatg ctaagctctc ttctctccta gagcaaggaa gccacgagcg gctgtgccgg
2340
aacgcggccg tctgccctta ctgcagcctc aggtttttct cggccgagct gaagcaagaa
2400
cacgagagca agtgtgagta taagaagctg acctgcctcg agtgcctgag caccttcaag
2460
tcctctttca gcatctggcg gcaccagggt gaagtcata atcagaacaa catggcaccc
2520
accgaaaact tttctttgcc cgttttggac cacaatggtg atgtgactgg ttcttcaagg
2580
ccccaatccc agcctgagcc caacaaagta aaccacatcg tcaccacaaa agacgacaac
2640
gtgttcagtg attcttcaga acaagttaac ttcgactcgg aagattcctc ttgtcttccc
2700
gaagacctta gtctttccaa gcaactgaaa atccaagtca aagaggagcc tgtggaggag
2760
gctgaagaag aggcacccga ggccagcaca gccccaaag aagcgggtcc tagcaaagaa
2820
gccagcctgt ggccctgcga gaagtgtggg aagatgttca cgggtgcataa gcagctggag
2880
cgtcaccagg agcttctgtg ctctgtgaaa ccatttattt gtcacgtgtg caacaaagct
2940
tttcgacta attttcgact ctggagtcac ttccaatcgc acatgtctca ggcttcagag
3000
gaatcggcac ataaggaatc tgaggtgtgc cctgttccca caaactctcc ctctccacca
3060
cctctgccac cgccaccacc actgcccag atccagcctc tggagcctga cagccccaca
3120
ggcctgtccg aaaacccaac tccagccaca gaaaaactgt ttgtgcccc aagaatcagac
3180
accctttttt accatgcccc acccctttca gcaatcacat ttaaaagaca gtttatgtgt
3240
aaactttgcc acaggacatt caagactgca tttagtcttt ggagtcacga acaaacacac
3300
aattgaaaga ccaacacttt ttacctatgg gaggcagtcc ccagatttca acctgaattg
3360
tgaaatgtgt cataagaaac aaaatatttt ttaaacaaga ataataaagg ttggagattg
3420
ttacgcttga aattaagttg gaggcaaatt gataattact tagtaatgtc ctttaacttta
3480
gaaatacagc ttttaaaata ttgtggttct ggaccttaca agaacaagat gggttgattt
3540
cattaatgtt gaaattggat tggctctgat tgtgtgcatg gttcctcatt ccattggtgtc
3600
agtataatca ttttaattgag gtttttggtt ttttattgat tagtggaata ctgtcgaagt
3660

attccttctt ttaattatct tagacacttg agttctagtt aaatcttaac catgttctta
3720
agtcctaaat aggaagaagt ggagtagttt gcagtattga tttatatctt agactacttt
3780
agcaataaaa gataaatctc aactttaata agttatcctg acacttgata aaaataaata
3840
tttggtatct tgtgggtcatg taaaacttct ttttgtatga aaattgtgag aaatttaaat
3900
cagcaatagt aacacttaga tttttataaa ctaacaaaaa cttgctctca gtcaatataa
3960
taaagtatag ttaaactcta aggaagacct gggaaatgaa aacaatttat ggaagtcccc
4020
tacagtcagt ttataagggc ttcagtagtg atagacattg ttataaaaaac ttgtaccatg
4080
ttacatgtac actgcaccac agtctaaatt cagaccagca tttgaaggac tgcacatatt
4140
tcatttcctc tgatttatgc tgtcaciaat tgaaaatctg agtgtagtta ggacaaaaaa
4200
caaagctaac catatggcac taattttgat tttaacatta gtgtaacaaa taaggctggg
4260
acatatatct acatagatcc cagacactca agaattagca cagctgatgt aaaattctaa
4320
attaccatct acttccagat agagcagagg agaaacacct cactgcagtt tcaacatgct
4380
ttccaagaac aatatatacg acatatacat tttcctgcct ctctcttggtg acaatttctg
4440
ttagaatttg ttgggggtct gatgggttaa atcatgggca aggccattct ctacatcatt
4500
gcttaatat tcaaaaatag gtattagagc actatcagtg gtccaaaatt agtttttagct
4560
acttatcttg ctccatgggt tttgggcttt tcaaagaata ctatgtataa tttgtaattg
4620
aaagcctttc agtaggatat ccaaagttca atgtgtttca aaagggaaaa cttttacttg
4680
tggggggtgg agttagatgt attaaaaaaa cgaaactaca aaatcctttt aagaaagtaa
4740
taccaattta gactctagtt tgtgttacga ggtattcttt caaatttttt ttaaaagcca
4800
actactgtca ttaagaaata atttttagatt tgtgctctag cagaaaataa ctctgtaccc
4860
atcaatctta ttgccaacat tccataccag tggtaggaaa gatattctca ttttttttat
4920
tgaaccagac attttttataa aatactgatt gactttgtac attatggata ttatatatga
4980
aattttgctt tgtattcttt cacttgaaaa aactccaaaa ttccacaata ttttagtagt
5040
taacttctta ttctttctta aatttgatgg agaagggaaa ataaattgca gttattgatt
5100
cttgccatct ttgttttctt aaagaaatct atgcatttta aggataaaac taaagcatat
5160
gggtttacat gaaacatcag gatggattat tgtacattga attcattccg cgtataatgt
5220
ggtatttctt actctgtcca tcttggtagc tgtcacttca aaagaagaca gtttcctga
5280

gtaatcatca cctacatggc cattagagta tctatcggtg ataattccat gatacagagt
 5340
 atcttggcat tataaattca gtatcccagg acctaaacct ttatgctaca ttttcgaaga
 5400
 ttttttaaaa ataattattgt taatcagtaa aaaaaaaaaa tattttttgat ctaaaccatag
 5460
 gttctgcata tctgttagat tttaaaaatg actgggtgttt tgtcttcaca tttttgtcta
 5520
 agcaaggaat ataagatttc aaataaaaatt ttgaaccaa aacattttata atgccgttct
 5580
 ggtttttcta ttacttttta tactgtactt taaaagcatt aggctgaaag agtttatatt
 5640
 ggtggtcaaa aaaaatatgc ttccactcat gtaactatatt taaatgttaa gtagtaaaat
 5700
 aatgaaagat atgttaatta ctttattcag taaagttttt taagaatggt tatctcagcc
 5760
 agtaggcaaa tacttggggg aaaa
 5784

<210> 3400

<211> 1069

<212> PRT

<213> Homo sapiens

<400> 3400

Thr	Gln	Ala	Met	Glu	Gly	Leu	Leu	His	Tyr	Ile	Asn	Pro	Ala	His	Ala
1				5					10					15	
Ile	Ser	Leu	Leu	Ser	Ala	Leu	Asn	Glu	Glu	Arg	Leu	Lys	Gly	Gln	Leu
			20					25					30		
Cys	Asp	Val	Leu	Leu	Ile	Val	Gly	Asp	Gln	Lys	Phe	Arg	Ala	His	Lys
		35					40					45			
Asn	Val	Leu	Ala	Ala	Ser	Ser	Glu	Tyr	Phe	Gln	Ser	Leu	Phe	Thr	Asn
	50					55					60				
Lys	Glu	Asn	Glu	Ser	Gln	Thr	Val	Phe	Gln	Leu	Asp	Phe	Cys	Glu	Pro
65					70					75				80	
Asp	Ala	Phe	Asp	Asn	Val	Leu	Asn	Tyr	Ile	Tyr	Ser	Ser	Ser	Leu	Phe
			85					90						95	
Val	Glu	Lys	Ser	Ser	Leu	Ala	Ala	Val	Gln	Glu	Leu	Gly	Tyr	Ser	Leu
			100					105					110		
Gly	Ile	Ser	Phe	Leu	Thr	Asn	Ile	Val	Ser	Lys	Thr	Pro	Gln	Ala	Pro
		115				120						125			
Phe	Pro	Thr	Cys	Pro	Asn	Arg	Lys	Lys	Val	Phe	Val	Glu	Asp	Asp	Glu
	130					135					140				
Asn	Ser	Ser	Gln	Lys	Arg	Ser	Val	Ile	Val	Cys	Gln	Ser	Arg	Asn	Glu
145				150						155				160	
Ala	Gln	Gly	Lys	Thr	Val	Ser	Gln	Asn	Gln	Pro	Asp	Val	Ser	His	Thr
			165					170						175	
Ser	Arg	Pro	Ser	Pro	Ser	Ile	Ala	Val	Lys	Ala	Asn	Thr	Asn	Lys	Pro
		180					185					190			
His	Val	Pro	Lys	Pro	Ile	Glu	Pro	Leu	His	Asn	Leu	Ser	Leu	Thr	Glu
	195					200					205				
Lys	Ser	Trp	Pro	Lys	Asp	Ser	Ser	Val	Val	Tyr	Ala	Lys	Ser	Leu	Glu
210					215						220				
His	Ser	Gly	Ser	Leu	Asp	Asp	Pro	Asn	Arg	Ile	Ser	Leu	Val	Lys	Arg

```

225          230          235          240
Asn Ala Val Leu Pro Ser Lys Pro Leu Gln Asp Arg Glu Ala Met Asp
          245          250          255
Asp Lys Pro Gly Val Ser Gly Gln Leu Pro Lys Gly Lys Ala Leu Glu
          260          265          270
Leu Ala Leu Lys Arg Pro Arg Pro Pro Val Leu Ser Val Cys Ser Ser
          275          280          285
Ser Glu Thr Pro Tyr Leu Leu Lys Glu Thr Asn Lys Gly Asn Gly Gln
          290          295          300
Gly Glu Asp Arg Asn Leu Leu Tyr Tyr Ser Lys Leu Gly Leu Val Ile
305          310          315          320
Pro Ser Ser Gly Ser Gly Ser Gly Asn Gln Ser Ile Asp Arg Ser Gly
          325          330          335
Pro Leu Val Lys Ser Leu Leu Arg Arg Ser Leu Ser Met Asp Ser Gln
          340          345          350
Val Pro Val Tyr Ser Pro Ser Ile Asp Leu Lys Ser Ser Gln Gly Ser
          355          360          365
Ser Ser Val Ser Ser Asp Ala Pro Gly Asn Val Leu Cys Ala Leu Ser
          370          375          380
Gln Lys Ser Ser Leu Lys Asp Cys Ser Glu Lys Thr Ala Leu Asp Asp
385          390          395          400
Arg Pro Gln Val Leu Gln Pro His Arg Leu Arg Ser Phe Ser Ala Ser
          405          410          415
Gln Ser Thr Asp Arg Glu Gly Ala Ser Pro Val Thr Glu Val Arg Ile
          420          425          430
Lys Thr Glu Pro Ser Ser Pro Leu Ser Asp Pro Ser Asp Ile Ile Arg
          435          440          445
Val Thr Val Gly Asp Ala Ala Thr Thr Ala Ala Ala Ser Ser Ser Ser
          450          455          460
Val Thr Arg Asp Leu Ser Leu Lys Thr Glu Asp Asp Gln Lys Asp Met
465          470          475          480
Ser Arg Leu Pro Ala Lys Arg Arg Phe Gln Ala Asp Arg Arg Leu Pro
          485          490          495
Phe Lys Lys Leu Lys Val Asn Glu His Gly Ser Pro Val Ser Glu Asp
          500          505          510
Asn Phe Glu Glu Gly Ser Ser Pro Thr Leu Leu Asp Ala Asp Phe Pro
          515          520          525
Asp Ser Asp Leu Asn Lys Asp Glu Phe Gly Glu Leu Glu Gly Thr Arg
          530          535          540
Pro Asn Lys Lys Phe Lys Cys Lys His Cys Leu Lys Ile Phe Arg Ser
545          550          555          560
Thr Ala Gly Leu His Arg His Val Asn Met Tyr His Asn Pro Glu Lys
          565          570          575
Pro Tyr Ala Cys Asp Ile Cys His Lys Arg Phe His Thr Asn Phe Lys
          580          585          590
Val Trp Thr His Cys Gln Thr Gln His Gly Ile Val Lys Asn Pro Ser
          595          600          605
Pro Ala Ser Ser Ser His Ala Val Leu Asp Glu Lys Phe Gln Arg Lys
          610          615          620
Leu Ile Asp Ile Val Arg Glu Arg Glu Ile Lys Lys Ala Leu Ile Ile
625          630          635          640
Lys Leu Arg Arg Gly Lys Pro Gly Phe Gln Gly Gln Ser Ser Ser Gln
          645          650          655
Ala Gln Gln Val Ile Lys Arg Asn Leu Arg Ser Arg Ala Lys Gly Ala

```



```
<210> 3401
<211> 579
```

<212> DNA

<213> Homo sapiens

<400> 3401

gttgaaaata aggaaaagga cagcaatatg ccacactttc aaactttgca agctattgtt
 60
 tctcacttcc aaaagttatt tgatgtgcct tctttaaatg gagtctatcc ccgaatgaat
 120
 gaagtttata ctaggcttgg agaaatgaac aatgctgtga gaaacctcca agaactctta
 180
 gaattagata gttcatcctc attgtgtgtg ctagtaagca ctgttgga aaactctgtagg
 240
 ctgattaatg aagatgtgaa tgagcaggtt atgcaggtat taggacctga agacctccag
 300
 agcattatct acaaattgga agaacacgag gaatttttcc cagcatttca ggcatttact
 360
 aatgatctac ttgaaatctt agaaattgat gactctggat gccattgtac ctgcagtaaa
 420
 gaaattaaaa gtactttcat actgaaaaca aatcaaatca tttttactgt gtaaattgta
 480
 ttcttaacat tttgtatttt gtaggattga tcttattttg agacaagggt tgtaaaatgt
 540
 atttgctctc agaattcatc cccttcttag tattaggtc
 579

<210> 3402

<211> 148

<212> PRT

<213> Homo sapiens

<400> 3402

Met	Pro	His	Phe	Gln	Thr	Leu	Gln	Ala	Ile	Val	Ser	His	Phe	Gln	Lys
1				5					10					15	
Leu	Phe	Asp	Val	Pro	Ser	Leu	Asn	Gly	Val	Tyr	Pro	Arg	Met	Asn	Glu
			20					25					30		
Val	Tyr	Thr	Arg	Leu	Gly	Glu	Met	Asn	Asn	Ala	Val	Arg	Asn	Leu	Gln
		35				40						45			
Glu	Leu	Leu	Glu	Leu	Asp	Ser	Ser	Ser	Ser	Leu	Cys	Val	Leu	Val	Ser
	50				55						60				
Thr	Val	Gly	Lys	Leu	Cys	Arg	Leu	Ile	Asn	Glu	Asp	Val	Asn	Glu	Gln
65				70					75					80	
Val	Met	Gln	Val	Leu	Gly	Pro	Glu	Asp	Leu	Gln	Ser	Ile	Ile	Tyr	Lys
			85				90						95		
Leu	Glu	Glu	His	Glu	Glu	Phe	Phe	Pro	Ala	Phe	Gln	Ala	Phe	Thr	Asn
			100				105						110		
Asp	Leu	Leu	Glu	Ile	Leu	Glu	Ile	Asp	Asp	Ser	Gly	Cys	His	Cys	Thr
		115				120					125				
Cys	Ser	Lys	Glu	Ile	Lys	Ser	Thr	Phe	Ile	Leu	Lys	Thr	Asn	Gln	Ile
	130					135					140				
Ile	Phe	Thr	Val												
145															

<210> 3403

<211> 1696

<212> DNA

<213> Homo sapiens

<400> 3403

aaaaacatca gtgtctgtgg gtagttagaa tcttcagttc ctgtgagcgt cggcgtcttc
60
tgggcctgtg gagtttcttg gacagggggcc gcggggctcc aggacggcgc ccttagcgac
120
accatggccc gaaatgcaga aaaggccatg acggccttag caagatttcg ccaggctcag
180
ctggaagagg gaaaagtga ggaacgaaga ccctttctgg cctcagaatg tactgaactg
240
cctaaagctg agaagtggag acgacagatc attggagaga tctctaaaaa agtggctcag
300
attcagaatg ctggtttagg tgaatttcga attcgtgacc tgaatgatga aattaacaag
360
ctgctaaggg agaaaggaca ctgggaggtc cggataaagg agctgggagg tcctgattat
420
ggaaaagtgt gccctaaaat gctggatcat gaaggaaaag aagtcccagg aaaccgaggt
480
tacaagtact ttggagcagc aaaagatttg cctgggtgta gagagctgtt tgaaaaanga
540
acctcttcc cctcccagnn aaagacacgt gctgagctca tgaaggcaat cgattttgag
600
tactatggtt acctagatga agatgatggt gttattgtgc ctttggaaca ggaatatgaa
660
aagaaactca gagccgagtt agtggaaaag tggaaagcag agagagaggc tcggctggca
720
agaggagaaa aggaagagga ggaggaagag gaggaagaga tcaacatcta tgcagtcacc
780
gaggaggagt cggacgagga aggcagccag gagaaaggag gggacgacag ccagcagaag
840
ttcattgtc acgtccctgt tccctcgag caagagattg aggaggcact ggtgcgaagg
900
aagaaaatgg aactcctcca gaagtatgca agcgagacct tgcaggccca aagtgaagaa
960
gccagaaggc tcctggggta ttaggaccca gctggggctc tccttgaggt tcttccatcc
1020
cccagtggta cctcaggacc cagggtgca gacacaggct ggtgctgcaa gggctcctgc
1080
cccattctca gccttccttc cctctccttg tctcatgttg accggagggt aggggtctgt
1140
ccctggtctt cctggtaggt tttgtacaca tattttgcta ctgtgtggat ccatttatct
1200
ttattgtgga gtgtatacaa caggttgcga actggctgcc tgtgtcttat tttgacttgc
1260
actgccattt tgaggggaga agaatcaatt agtggcaaac atttaaaaat gcaatttttt
1320
gcagaccaa gtataatttt aaaaaatgca aattttctaa aagacacatc tcttgaaaaa
1380
tgagatgatg tggccaggcg cagtggctca cgctgtaac cccagcactt tgggaggccg
1440
aggcgggagg gtcacgaggt caagagatgg agaccatcct ggccaacatg gtgaaacccc
1500

atgtctacta aaaatacaaa aaaattagct gggcgtactg gcatgcacct gtagtcccag
 1560
 ctgcttttggg aggctgaggc aggagaatca cttgaacccc cggaggtgga ggtttgagtg
 1620
 agcccagatc gtggccattg actccaagcc ttgggacaag tgggaacctc ttccccccaa
 1680
 aaaaaaaaaa aagttt
 1696

<210> 3404

<211> 286

<212> PRT

<213> Homo sapiens

<400> 3404

Met	Ala	Arg	Asn	Ala	Glu	Lys	Ala	Met	Thr	Ala	Leu	Ala	Arg	Phe	Arg	1	5	10	15
Gln	Ala	Gln	Leu	Glu	Glu	Gly	Lys	Val	Lys	Glu	Arg	Arg	Pro	Phe	Leu	20	25	30	
Ala	Ser	Glu	Cys	Thr	Glu	Leu	Pro	Lys	Ala	Glu	Lys	Trp	Arg	Arg	Gln	35	40	45	
Ile	Ile	Gly	Glu	Ile	Ser	Lys	Lys	Val	Ala	Gln	Ile	Gln	Asn	Ala	Gly	50	55	60	
Leu	Gly	Glu	Phe	Arg	Ile	Arg	Asp	Leu	Asn	Asp	Glu	Ile	Asn	Lys	Leu	65	70	75	80
Leu	Arg	Glu	Lys	Gly	His	Trp	Glu	Val	Arg	Ile	Lys	Glu	Leu	Gly	Gly	85	90	95	
Pro	Asp	Tyr	Gly	Lys	Val	Gly	Pro	Lys	Met	Leu	Asp	His	Glu	Gly	Lys	100	105	110	
Glu	Val	Pro	Gly	Asn	Arg	Gly	Tyr	Lys	Tyr	Phe	Gly	Ala	Ala	Lys	Asp	115	120	125	
Leu	Pro	Gly	Val	Arg	Glu	Leu	Phe	Glu	Lys	Xaa	Thr	Ser	Ser	Ser	Ser	130	135	140	
Gln	Xaa	Lys	Thr	Arg	Ala	Glu	Leu	Met	Lys	Ala	Ile	Asp	Phe	Glu	Tyr	145	150	155	160
Tyr	Gly	Tyr	Leu	Asp	Glu	Asp	Asp	Gly	Val	Ile	Val	Pro	Leu	Glu	Gln	165	170	175	
Glu	Tyr	Glu	Lys	Lys	Leu	Arg	Ala	Glu	Leu	Val	Glu	Lys	Trp	Lys	Ala	180	185	190	
Glu	Arg	Glu	Ala	Arg	Leu	Ala	Arg	Gly	Glu	Lys	Glu	Glu	Glu	Glu	Glu	195	200	205	
Glu	Glu	Glu	Glu	Ile	Asn	Ile	Tyr	Ala	Val	Thr	Glu	Glu	Glu	Ser	Asp	210	215	220	
Glu	Glu	Gly	Ser	Gln	Glu	Lys	Gly	Gly	Asp	Asp	Ser	Gln	Gln	Lys	Phe	225	230	235	240
Ile	Ala	His	Val	Pro	Val	Pro	Ser	Gln	Gln	Glu	Ile	Glu	Glu	Ala	Leu	245	250	255	
Val	Arg	Arg	Lys	Lys	Met	Glu	Leu	Leu	Gln	Lys	Tyr	Ala	Ser	Glu	Thr	260	265	270	
Leu	Gln	Ala	Gln	Ser	Glu	Glu	Ala	Arg	Arg	Leu	Leu	Gly	Tyr	275	280	285			

<210> 3405

<211> 402

<212> DNA

<213> Homo sapiens

<400> 3405

gggtgggagg ccccttgca ggagaggctg gcgttctatc agacagcaat tgaaagcgcc
60
agacaagctg gagacagcgc caagatgcgg cgctacgacg gggggcttaa aacactggaa
120
aacctgctcg cctccatccg taagggaat gccattgacg aagcggacat cccgccgcca
180
gtggccatag gaaaaggccc ggcgtccacg cctacctaca gccctgcacc caccagccg
240
gcccctagaa tcgcgtcagc cccagagccc agggtcaccc tggagggacc ttctgccacc
300
gccccagcct catctccagg cttggctaag cccagatgc cccaggtcc ctgcagccct
360
ccctctggcc cagttgcaga gccgccagcg cgactacaag ct
402

<210> 3406

<211> 134

<212> PRT

<213> Homo sapiens

<400> 3406

Gly	Trp	Glu	Ala	Pro	Leu	Gln	Glu	Arg	Leu	Ala	Phe	Tyr	Gln	Thr	Ala
1				5					10					15	
Ile	Glu	Ser	Ala	Arg	Gln	Ala	Gly	Asp	Ser	Ala	Lys	Met	Arg	Arg	Tyr
			20					25					30		
Asp	Arg	Gly	Leu	Lys	Thr	Leu	Glu	Asn	Leu	Leu	Ala	Ser	Ile	Arg	Lys
		35					40					45			
Gly	Asn	Ala	Ile	Asp	Glu	Ala	Asp	Ile	Pro	Pro	Pro	Val	Ala	Ile	Gly
	50					55					60				
Lys	Gly	Pro	Ala	Ser	Thr	Pro	Thr	Tyr	Ser	Pro	Ala	Pro	Thr	Gln	Pro
65					70					75				80	
Ala	Pro	Arg	Ile	Ala	Ser	Ala	Pro	Glu	Pro	Arg	Val	Thr	Leu	Glu	Gly
			85						90				95		
Pro	Ser	Ala	Thr	Ala	Pro	Ala	Ser	Ser	Pro	Gly	Leu	Ala	Lys	Pro	Gln
		100						105					110		
Met	Pro	Pro	Gly	Pro	Cys	Ser	Pro	Pro	Ser	Gly	Pro	Val	Ala	Glu	Pro
		115					120					125			
Pro	Ala	Arg	Leu	Gln	Ala										
															130

<210> 3407

<211> 535

<212> DNA

<213> Homo sapiens

<400> 3407

ggaatgaggg gggatgggga agaaccccc aggacagcac caagcaggtc tgcggggacc
60
tttcccggac accatgcctt ctgcggcgtg aggcaggtgg cggcaccgac aggccccggg
120

gggacctttc ccggacaccc aacctcctcg gtggcgaggc aggtggcggc accgacaggc
 180
 ccggcgggga cctttcccg ancacctggc ctccttgga agcaggtggc ggcaccaaca
 240
 ggcccggggg ggacctttcc cggacacctg gcctcctcgg cgaggcaggt ggcagaactg
 300
 gttccacgtc tgatcttcct tagacaaacc tgccttcaga ggaaattgtg ttcaactgga
 360
 gaaactggaa aatgtactag atattggctg atatgaagga tatatgtttt aagtatgata
 420
 attcgatttt ggctctgtag ggaaaggctc ttattttaaa aagatgtgca ctagagaaaa
 480
 aggaaacagc atgtagcaaa tacatccacg gatgtcctcc tggtttaaaa aaaaa
 535

<210> 3408
 <211> 131
 <212> PRT
 <213> Homo sapiens

<400> 3408
 Gly Met Arg Gly Asp Gly Glu Glu Pro Pro Arg Thr Ala Pro Ser Arg
 1 5 10 15
 Ser Ala Gly Thr Phe Pro Gly His His Ala Phe Ser Ala Val Arg Gln
 20 25 30
 Val Ala Ala Pro Thr Gly Pro Gly Gly Thr Phe Pro Gly His Pro Thr
 35 40 45
 Ser Ser Val Ala Arg Gln Val Ala Ala Pro Thr Gly Pro Ala Gly Thr
 50 55 60
 Phe Pro Gly Xaa Pro Gly Leu Leu Gly Lys Gln Val Ala Ala Pro Thr
 65 70 75 80
 Gly Pro Gly Gly Thr Phe Pro Gly His Leu Ala Ser Ser Ala Arg Gln
 85 90 95
 Val Ala Glu Leu Val Pro Arg Leu Ile Phe Leu Arg Gln Thr Cys Leu
 100 105 110
 Gln Arg Lys Leu Cys Ser Thr Gly Glu Thr Gly Lys Cys Thr Arg Tyr
 115 120 125
 Trp Leu Ile
 130

<210> 3409
 <211> 959
 <212> DNA
 <213> Homo sapiens

<400> 3409
 nagatctccg aggacaccgg acgggagcgc ttggccatcc tctctccggc agaggagcag
 60
 acgtttgctt tccaagtgca aaactacaga cgcgcgcgcg cacacacgca agcacacgcg
 120
 gagagagagg aaccttgccg gtccgaggca gctctgcgcg tcccctcctg cgcttagcat
 180
 cctcggccca gcgcggcccg caccgccatg gaggtgctgg agagcgggga gcagggcgtg
 240

ctgcagtggg accgcaagct gagcgagctg tcagagcccg gggacggcga ggccctcatg
 300
 taccacagcg acttctcaga acttctggat gagttttccc agaacgtctt gggtcagctc
 360
 ctgaatgac ctttctcttc agagaagagt gtgtcaatgg aggtggaacc ttccccgacg
 420
 tccccggcgc ctctcatcca ggctgagcac agctactccc tgtgcgagga gcctcgggccc
 480
 cagtcgcctt tcacccacat taccaccagt gacagcttca atgacgatga ggtggaaagt
 540
 nngagaaatg gtacctgtct acagacttcc cttcaacatc catcaagaca gagccagtta
 600
 cagacgaacc acccccagga ctcgttccgt ctgtcactct gaccatcaca gccatctcca
 660
 ccncggttg aaaaggagga acctcctctg gaaatgaaca ctgggggttga ttctcgtgc
 720
 cagaccatta ttctaaaaat taagctggag cctcatgaag tggatcagtt tctaaacttc
 780
 tctcctaaag aaggtctgtc tngccctccc tgtgtccctt tgggttatgg atatggtctc
 840
 tgggtctaca gagagggaaat atggcgagag agctgggatg agtttgtacc acagatggtg
 900
 tagctggctt tatgaaatag ctctgttctt aaaaaataaa aattttgctt ccaaataaa
 959

<210> 3410

<211> 144

<212> PRT

<213> Homo sapiens

<400> 3410

Met	Glu	Val	Leu	Glu	Ser	Gly	Glu	Gln	Gly	Val	Leu	Gln	Trp	Asp	Arg
1				5					10					15	
Lys	Leu	Ser	Glu	Leu	Ser	Glu	Pro	Gly	Asp	Gly	Glu	Ala	Leu	Met	Tyr
			20					25					30		
His	Thr	His	Phe	Ser	Glu	Leu	Leu	Asp	Glu	Phe	Ser	Gln	Asn	Val	Leu
			35				40					45			
Gly	Gln	Leu	Leu	Asn	Asp	Pro	Phe	Leu	Ser	Glu	Lys	Ser	Val	Ser	Met
	50					55					60				
Glu	Val	Glu	Pro	Ser	Pro	Thr	Ser	Pro	Ala	Pro	Leu	Ile	Gln	Ala	Glu
					70					75					80
His	Ser	Tyr	Ser	Leu	Cys	Glu	Glu	Pro	Arg	Ala	Gln	Ser	Pro	Phe	Thr
				85					90					95	
His	Ile	Thr	Thr	Ser	Asp	Ser	Phe	Asn	Asp	Asp	Glu	Val	Glu	Ser	Xaa
			100					105					110		
Arg	Asn	Gly	Thr	Cys	Leu	Gln	Thr	Ser	Leu	Gln	His	Pro	Ser	Arg	Gln
		115					120					125			
Ser	Gln	Leu	Gln	Thr	Asn	His	Pro	Gln	Asp	Ser	Phe	Arg	Leu	Ser	Leu
		130				135						140			

<210> 3411

<211> 958

<212> DNA

<213> Homo sapiens

<400> 3411

nngcgcgcgcg gttttgttgt tattgcgagg gggtcgcggt ggggcggggc agtgaccccg
 60
 ggccggccgt tgtgccctca tccctccac ccttccttcg tatagcttcc tttctcctca
 120
 cgacggcctc cacagtccgg agcccggcgg agcccggacc tggcggggag agctgcctcc
 180
 acggccgggc acccagaccc caccgtcgca gtcgccacca cctcagtcca tccttggtac
 240
 cggcaatggg ctctgtatcc tccagtgcac ttgtaactga cttggacacg gaataactaag
 300
 aactcacttc tgtcctcacc ccagtgcgc cggcggtgac catctcggct cttttgggct
 360
 taactgccgc tcctctggac tctgtctgac tttgggggca ccatggacca aagtgggatg
 420
 gagattcctg tgaccctcat cattaaagca ccgaatcaga aatacagtga ccagactatt
 480
 agctgcttct tgaactggac cgtggggaaa ctaaaaacgc atctatctaa cgtttaccct
 540
 agcaaaccat tgacgaagga tcagagattg gtgtattcgg gcagactgct tcccgatcat
 600
 ctgcagctga aagacattct cagaaaacaa gatgagtatc atatggttca tctagtatgt
 660
 acttctcgga ctctctccag ttctccaaaa tccagcacca atagagaaag tcatgaagca
 720
 ttggcatcca gcagcaattc tagttcagat cattcaggat caacaactcc atcatctggt
 780
 caagaaacct tgtcttttagc tgtgggttct tcctcagaag gattgaggca gcgtaccctt
 840
 ccacaagcac aaactgacca agcacagagt caccagtttc catatgtaat gcaaggaaat
 900
 gtagacaacc aatttctctgg gcaagctgct ccacctggat tcccagtga tccgcggg
 958

<210> 3412

<211> 185

<212> PRT

<213> Homo sapiens

<400> 3412

Met	Asp	Gln	Ser	Gly	Met	Glu	Ile	Pro	Val	Thr	Leu	Ile	Ile	Lys	Ala
1				5					10					15	
Pro	Asn	Gln	Lys	Tyr	Ser	Asp	Gln	Thr	Ile	Ser	Cys	Phe	Leu	Asn	Trp
			20					25					30		
Thr	Val	Gly	Lys	Leu	Lys	Thr	His	Leu	Ser	Asn	Val	Tyr	Pro	Ser	Lys
		35					40					45			
Pro	Leu	Thr	Lys	Asp	Gln	Arg	Leu	Val	Tyr	Ser	Gly	Arg	Leu	Leu	Pro
	50					55					60				
Asp	His	Leu	Gln	Leu	Lys	Asp	Ile	Leu	Arg	Lys	Gln	Asp	Glu	Tyr	His
65					70					75				80	
Met	Val	His	Leu	Val	Cys	Thr	Ser	Arg	Thr	Pro	Pro	Ser	Ser	Pro	Lys
				85					90					95	
Ser	Ser	Thr	Asn	Arg	Glu	Ser	His	Glu	Ala	Leu	Ala	Ser	Ser	Ser	Asn


```

<400> 3413
nntcagaaac tattttcttga gtccgttctt ctcagagttt attacttctt cccacgtctt
60
gggtctgctgg tctaattccc ttcaataacc ttcaacatag gaaaaaacca gagtgtgttg
120
tgtgtcttta aagatattag agaagtggga gctgttgccc caaaactggt ttcttatgta
180
gctactgaag gaacagaaaag caggaagaaa gaaaaaagtt agttgtggcc ccagaagagt
240
tgtttttcaa atgccgagcc gtgaagcctc atgcactcaa cacaaagttt ttctttcata
300
tagataagcc tgaagaaaaa agaataagcc tgagtatgta ttttaggtgt ccaactatcc
360
attaccaaga agaaatctat tcgtttgagc ctgagacact ctttgaggta aaaaattaga
420
atgaaagaac ctttggatgg tgaatgtggc aaagcagtggt taccacagca ggagcttctg
480
gacaaaatta aagaagaacc agacaatgct caagagtatg gatgtgtcca acagccaaaa
540
actcaagaaa gttaaattgaa aattggtggt gtgtcttcag ttaatgagag acctattgcc
600
cagcagttga acccaggctt tcagctttct tttgcatcat ctggcccaag tgtgttgctt
660
ccttcagttc cagctgttgc tattaagggt ttttgttctg gttgtaaaaa aatgctttat
720
aagggccaaa ctgcatatca taagacagga tctactcagc tcttctgctc cacacgatgc
780
atcaccagac attcttcacc tgcttgctg ccacctctc ccaagaaaac ctgcacaaac
840
tgctcgaaag acattttaaa tcctaaggat gtgatcacia ctcgctttga gaattcctat
900
cctagcaaaag atttctgcag ccaatcatgc ttgtcatctt atgagctaaa gaaaaaacct
960
gttgttacca tatataccaa aagcatttca actaagtgca gtatgtgtca gaagaatgct
1020
gatactcgat ttgaagttaa atatcaaaat gtggtacatg gtctttgtag tgatgcctgt
1080

```

ttttcaaaat ttcactctac aaacaacctc accacgaact gttgtgagaa ctgtgggagc
1140
tattgctata gtagctctgg tccttgccaa tcccagaagg ttttttagttc aacaagtgtc
1200
acggcataca agcagaattc tgcccaaatt cctccatatg ccctggggaa gtcattgaga
1260
tcctcagcag aaatgattga aaataccaat agcttgggga agacagagct tttctgttct
1320
attaattgct tatctgctta cagagttaag actgttactt ctgcagggtgt ccaggtttca
1380
tgtcatagtt gtaaaacctc agcaatccct cagtatcacc tagccatgtc agatggaact
1440
atatacagct tctgcagctc cagttgtgtg gttgctttcc agaattgtatt tagcaagcca
1500
aaaggaacaa actcttcggc ggtgccctg tctcagggcc aagtggttgt aagcccggcc
1560
tcctccaggt cagcagtgtc aataggagga ggtaacacct ctgccgtttc cccagctcc
1620
atccgtggct ctgctgcagc cagcctccaa cctcttggtg aacaatccca gcaagttgct
1680
ttaaccata cagttgttaa actcaagtgt cagcactgta accatctatt tgccacaaaa
1740
ccagaacttc ttttttaciaa gggtaaaatg tttctgtttt gtggcaagaa ttgctctgat
1800
gaatacaaga agaaaaataa agttgtggca atgtgtgaat attgtaaaat tgagaaaatt
1860
gtaaaggaga ctgttcgggt ctcagggtgt gacaagtcac tctgtagtga aggttgcaaa
1920
ttgctttata aacatgactt ggcaaaacgc tggggaaatc actgcaaaat gtgcagctac
1980
tgttcacaga catccccaaa tttggtacag aatcgattgg agggcaagtt agaagagttt
2040
tgttgtgaag attgtatgtc caaatttaca gttctgtttt atcagatggc caagtgtgat
2100
ggttgtaaac gacagggtaa actaagcgag tccataaagt ggcgaggcaa cattaacat
2160
ttctgtaacc tattttgtgt cttggagttt tgtcatcagc aaattatgaa tgactgtctt
2220
ccacaaaata aagtaaataa ttctaaagca aaaactgctg tgacggagct cccttctgca
2280
aggacagata caacaccagt tataaccagt gtgatgtcat tggcaaaaat acctgctacc
2340
ttatctacag ggaacactaa cagtgtttta aaagggtgcag ttactaaaga ggcagcaaa
2400
atcattcaag atgaaagtac acaggaagat gctatgaaat ttccatcttc ccaatcttcc
2460
cagccttcca ggctttttaa gaacaaaggc atatcatgca aaccggtcac acagaccaag
2520
gccatttctt gcaaaccaca tacacagcac aaagaatgtc agacagaatg ccctgttcgt
2580
gcagtttgct gaggtgttcc cgctgaagggt atttggctac cagccagatc ccctgaacta
2640
ccaaatagct gtgggctttc tggaactgct ggctgggttg ctgctggtca tgggcccacc
2700

gatgctgcaa gagatcagta acttgttctt gattctgctc atgatggggg ctatcttcac
 2760
 cttggcagct ctgaaagagt cactaagcac ctgtatccca gccattgtct gcctgggggtt
 2820
 cctgctgctg ctgaatgtcg gccagctctt agcccagact aagaagggtgg tcagacccac
 2880
 taggaagaag actctaagta cattcaagga atcctggaag tagagcatct ctgtctcttt
 2940
 atgccatgca gctgtcacag caggaacatg gtagaacaca gagtctatca tcttgttacc
 3000
 agtataatat ccaggggtcag ccagtgttga aagagacatt ttgtctacct ggcactgctt
 3060
 tctcttttta gctttactac tcttttgtga ggagtacatg ttatgcatat taacattcct
 3120
 catgtcatat gaaaatacaa aataagcaga aaagaaattt aaatcaacca aaattctgat
 3180
 gcccacaata accactttta atgccttgggt gtaagtatac ctctgaactt ttttctgtgc
 3240
 ctttaaacag atatatattt tttttaaatg aaaataaaac catatatacct attttatttc
 3300
 ctccttttaa aaccttataa actataaacac tgtaaaaaaa aaaa
 3344

<210> 3414

<211> 723

<212> PRT

<213> Homo sapiens

<400> 3414

Met	Lys	Glu	Pro	Leu	Asp	Gly	Glu	Cys	Gly	Lys	Ala	Val	Val	Pro	Gln
1				5				10						15	
Gln	Glu	Leu	Leu	Asp	Lys	Ile	Lys	Glu	Glu	Pro	Asp	Asn	Ala	Gln	Glu
		20						25				30			
Tyr	Gly	Cys	Val	Gln	Gln	Pro	Lys	Thr	Gln	Glu	Ser	Lys	Leu	Lys	Ile
	35					40					45				
Gly	Gly	Val	Ser	Ser	Val	Asn	Glu	Arg	Pro	Ile	Ala	Gln	Gln	Leu	Asn
	50				55					60					
Pro	Gly	Phe	Gln	Leu	Ser	Phe	Ala	Ser	Ser	Gly	Pro	Ser	Val	Leu	Leu
65				70					75					80	
Pro	Ser	Val	Pro	Ala	Val	Ala	Ile	Lys	Val	Phe	Cys	Ser	Gly	Cys	Lys
			85					90					95		
Lys	Met	Leu	Tyr	Lys	Gly	Gln	Thr	Ala	Tyr	His	Lys	Thr	Gly	Ser	Thr
		100						105					110		
Gln	Leu	Phe	Cys	Ser	Thr	Arg	Cys	Ile	Thr	Arg	His	Ser	Ser	Pro	Ala
	115					120					125				
Cys	Leu	Pro	Pro	Pro	Pro	Lys	Lys	Thr	Cys	Thr	Asn	Cys	Ser	Lys	Asp
	130					135					140				
Ile	Leu	Asn	Pro	Lys	Asp	Val	Ile	Thr	Thr	Arg	Phe	Glu	Asn	Ser	Tyr
145				150					155					160	
Pro	Ser	Lys	Asp	Phe	Cys	Ser	Gln	Ser	Cys	Leu	Ser	Ser	Tyr	Glu	Leu
			165					170					175		
Lys	Lys	Lys	Pro	Val	Val	Thr	Ile	Tyr	Thr	Lys	Ser	Ile	Ser	Thr	Lys
		180						185				190			
Cys	Ser	Met	Cys	Gln	Lys	Asn	Ala	Asp	Thr	Arg	Phe	Glu	Val	Lys	Tyr

2590

625		630		635		640									
Leu	Ser	Thr	Gly	Asn	Thr	Asn	Ser	Val	Leu	Lys	Gly	Ala	Val	Thr	Lys
				645					650					655	
Glu	Ala	Ala	Lys	Ile	Ile	Gln	Asp	Glu	Ser	Thr	Gln	Glu	Asp	Ala	Met
			660					665					670		
Lys	Phe	Pro	Ser	Ser	Gln	Ser	Ser	Gln	Pro	Ser	Arg	Leu	Leu	Lys	Asn
		675				680					685				
Lys	Gly	Ile	Ser	Cys	Lys	Pro	Val	Thr	Gln	Thr	Lys	Ala	Thr	Ser	Cys
	690				695				700						
Lys	Pro	His	Thr	Gln	His	Lys	Glu	Cys	Gln	Thr	Glu	Cys	Pro	Val	Arg
705				710					715					720	
Ala	Val	Cys													

<210> 3415
 <211> 3501
 <212> DNA
 <213> Homo sapiens

<400> 3415
 ngcagccccg gcggccgaac gccgcgcgcg cgggactcca tcgtcagaga agtcattcag
 60
 aattcaaaag aagttctaag tttattgcaa gaaaaaaacc ctgccttcaa gccggttctt
 120
 gcaattatcc aggcaggtga cgacaacttg atgcaggaaa tcaaccagaa tttggctgag
 180
 gaggctggtc tgaacatcac tcacatttgc ctccctccag atagcagtga agccgagatt
 240
 atagatgaaa tcttaaagat caatgaagat accagagtac atggccttgc ccttcagatc
 300
 tctgagaact tgtttagcaa caaagtcctc aatgccttga aaccagaaaa agatgtggat
 360
 ggagtaacag acataaacct ggggaagctg gtgcgagggg atgcccatga atgttttgtt
 420
 tcacctgttg ccaaagctgt aattgaactt cttgaaaaat cagtaggtgt caacctagat
 480
 ggaaagaaga ttttggtagt gggggcccat gggctcttgg aagctgctct acaatgcctg
 540
 ttccagagaa aagggtccat gacaatgagc atccagtgga aaacacgcca gcttcaaagc
 600
 aagcttcacg aggctgacat tgtggtccta ggctcaccta agccagaaga gattccccct
 660
 acttggtatc aaccaggaac tactgttctc aactgctccc atgacttctt gtcaggggaag
 720
 gttgggtgtg gctctccaag aatanncatt ttgggtggact cattgaggaa gatgatgtga
 780
 ttcttcttgc ctgcagctct gcgaattcag aacatggtca gtagtggaag gagatggctt
 840
 cgtgaacagc agcacaggcg gtggagactt cactgcttga aacttcagcc tctctccct
 900
 gtgccaaagt acattgagat ttcaagagga caaactccaa aagctgtgga tgtccttgcc
 960
 aaggagattg gattgcttgc agatgaaatt gaaatctatg gcaaaagcaa agccaaagta
 1020

cgtttgctccg tgctagaaag gttaaaggat caagcagatg gaaaatacgt cttagttgct
1080
gggatcacac ccacccctct tggagaaggg aagagcacag tcaccatcgg gcttggtgcag
1140
gctctgaccg cacacctgaa tgtcaactcc tttgcctgct tgaggcagcc ttcccaagga
1200
ccgacgtttg gagtgaaagg aggagccgcg ggtggtggat atgcccaggt catccccatg
1260
gaggagttca accttcactt gactggagac atccacgcca tcaccgctgc caataacttg
1320
ctggctgccg ccatcgacac gaggattctt catgaaaaca cgcaaacaga taaggctctg
1380
tataatcggc tggttccttt agtgaatggt gtcagagaat tttcagaaat tcagcttgct
1440
cggctaaaaa aactgggaat aaataagact gatccgagca cactgacaga agaggaagtg
1500
agtaaatttg cccgtctcga catcgaccca tctaccatca cgtggcagag agtattggat
1560
acaaatgacc gatttctacg aaaaataacc atcgggcagg gaaacacaga gaagggccat
1620
taccggcagg cgcagtttga catcgcagtg gccagcgaga tcatggcggg gctggccctg
1680
acggacagcc tcgcagacat gaaggcacgg ctgggaagga tgggtggtggc cagtgcacaaa
1740
agcgggcagc ctgtgacagc agatgatttg ggggtgacag gtgctttgac agttttgatg
1800
aaagatgcaa taaaaccaa cctgatgcag accctggaag ggacacctgt gttcgtgcat
1860
gcgggccctt ttgctaacat tgctcacggc aactcttcag tgttggctga taaaattgcc
1920
ctgaaactgg ttggtgaaga aggatttgta gtgaccgaag ctggcttttg tgctgacatc
1980
ggaatggaga aattcttcaa catcaagtgc cgagcttccg gcttggtgcc caacgtgggt
2040
gtgttagtgg caacggtgcg agctctgaag atgcatggag gcgggccaaag tgtaacggct
2100
ggtgttcttc ttaagaaaga atatacagag gagaacatcc agctggtggc agacggctgc
2160
tgtaacctcc agaagcaa atcagatcact cagctctttg gggttcccg tgtggtggct
2220
ctgaatgtct tcaagaccga caccgcgct gagattgact tgggtgtgtga gcttgcaaag
2280
cgggctggtg cctttgatgc agtccctgc tatcactggt cggttggtgg aaaaggatcg
2340
gtggacttgg ctcggtgtgt gagagaggct gcgagtaaaa gaagccgatt ccagttctctg
2400
tatgatgttc aggttccaat tgtggacaag ataaggacca ttgctcaggc tgtctatgga
2460
gccaaagata ttgaactctc tcctgaggca caagccaaaa tagatcgta cactcaacag
2520
ggttttggaa atttgccc atgcatggca aagaccacc tttctctatc tcaccaacct
2580
gacaaaaaag gtgtgccaaag ggacttcac ttacctatca gtgacgtccg ggccagcata
2640

ggcgctgggt tcatttacc c tttggtcgga acgatgagca ccatgccagg actgcccacc
 2700
 cggccctgct tttatgacat agatcttgat accgaaacag aacaagttaa aggcttggtc
 2760
 taagtggaca aggctctcac aggacccgat gcagactcct gaaacagact actctttgcc
 2820
 tttttgctgc agttggagaa gaaactgaat ttgaaaaatg tctgttatgc aatgctggag
 2880
 acatggtgaa ataggccaaa gatttcttct tcgttcaaga tgaattctgt tcacagtgga
 2940
 gtatgggtgtt cggcaaaagg acctccacca agactgaaag aaactaattt atttctgttt
 3000
 ctgtggagtt tccattattt ctactgctta cactttagaa tgtttatatt atggggacta
 3060
 agggattagg agtgtgaact aaaaggtaac attttccact ctcaagtttt ctactttgtc
 3120
 tttgaactga aaataaacat ggatctagaa aaccaaccag caagttttca gtgccagata
 3180
 aaactctgct ctctagaggt aactcctcat gggaggcagc taggagtgtt acctgacacc
 3240
 agtttcctag aaaactgtga caagcaaagc aataacacac gtcgagaaat atctgatcaa
 3300
 gcgggaaatc ttctgactgt cggggatctc tagtaagatc tcttggaatg aagtgcactg
 3360
 tgtatccaaa actattttcc agcgccagtg aagttgctct tacctaaaac aaatgggttt
 3420
 atgctagttt ccaccaagga atgagtctcg atggccatta aactttctaa gcgcacaggg
 3480
 ctaggaaaag tcaaaaaaaaa a
 3501

<210> 3416

<211> 259

<212> PRT

<213> Homo sapiens

<400> 3416

Xaa	Ser	Pro	Gly	Gly	Arg	Thr	Pro	Ala	Ala	Arg	Asp	Ser	Ile	Val	Arg
1				5					10					15	
Glu	Val	Ile	Gln	Asn	Ser	Lys	Glu	Val	Leu	Ser	Leu	Leu	Gln	Glu	Lys
			20					25					30		
Asn	Pro	Ala	Phe	Lys	Pro	Val	Leu	Ala	Ile	Ile	Gln	Ala	Gly	Asp	Asp
		35					40				45				
Asn	Leu	Met	Gln	Glu	Ile	Asn	Gln	Asn	Leu	Ala	Glu	Glu	Ala	Gly	Leu
	50					55					60				
Asn	Ile	Thr	His	Ile	Cys	Leu	Pro	Pro	Asp	Ser	Ser	Glu	Ala	Glu	Ile
65				70					75					80	
Ile	Asp	Glu	Ile	Leu	Lys	Ile	Asn	Glu	Asp	Thr	Arg	Val	His	Gly	Leu
			85					90						95	
Ala	Leu	Gln	Ile	Ser	Glu	Asn	Leu	Phe	Ser	Asn	Lys	Val	Leu	Asn	Ala
		100						105					110		
Leu	Lys	Pro	Glu	Lys	Asp	Val	Asp	Gly	Val	Thr	Asp	Ile	Asn	Leu	Gly
		115					120					125			
Lys	Leu	Val	Arg	Gly	Asp	Ala	His	Glu	Cys	Phe	Val	Ser	Pro	Val	Ala

130 135 140
 Lys Ala Val Ile Glu Leu Leu Glu Lys Ser Val Gly Val Asn Leu Asp
 145 150 155 160
 Gly Lys Lys Ile Leu Val Val Gly Ala His Gly Ser Leu Glu Ala Ala
 165 170 175
 Leu Gln Cys Leu Phe Gln Arg Lys Gly Ser Met Thr Met Ser Ile Gln
 180 185 190
 Trp Lys Thr Arg Gln Leu Gln Ser Lys Leu His Glu Ala Asp Ile Val
 195 200 205
 Val Leu Gly Ser Pro Lys Pro Glu Glu Ile Pro Leu Thr Trp Ile Gln
 210 215 220
 Pro Gly Thr Thr Val Leu Asn Cys Ser His Asp Phe Leu Ser Gly Lys
 225 230 235 240
 Val Gly Cys Gly Ser Pro Arg Ile Xaa Ile Leu Val Asp Ser Leu Arg
 245 250 255
 Lys Met Met

<210> 3417
 <211> 405
 <212> DNA
 <213> Homo sapiens

<400> 3417
 gggggggcgg cctgagaaga tattatggct gctgccacgg agcataatcg cccgagcagc
 60
 ggtgacagga acctggagcg aagatgcagc cccaacctct cccgagaggt gctctacgaa
 120
 atctttcgct ccctacacac cctgggttgga cagcttgacc tcagagatga tgtggtgaaa
 180
 attacaatcg attggaacaa gctccagagc ctctcggcat tccagcctgc attgctcttt
 240
 agtgcacttg aacaacacat tttatattta caggtaaatt tcttggttaga aatgataacc
 300
 cgatattgaa aatagaaatt gattgtgggt aagttagttg gagtatttga cagttctaaa
 360
 cactatatta atagtgttgc taataaaacg ttatttacat ccgga
 405

<210> 3418
 <211> 94
 <212> PRT
 <213> Homo sapiens

<400> 3418
 Met Ala Ala Ala Thr Glu His Asn Arg Pro Ser Ser Gly Asp Arg Asn
 1 5 10 15
 Leu Glu Arg Arg Cys Ser Pro Asn Leu Ser Arg Glu Val Leu Tyr Glu
 20 25 30
 Ile Phe Arg Ser Leu His Thr Leu Val Gly Gln Leu Asp Leu Arg Asp
 35 40 45
 Asp Val Val Lys Ile Thr Ile Asp Trp Asn Lys Leu Gln Ser Leu Ser
 50 55 60
 Ala Phe Gln Pro Ala Leu Leu Phe Ser Ala Leu Glu Gln His Ile Leu

catcctgtgt aatcgatagg agaaagtcag gatgagctgc acaccgagaa cgtgctccgt
120
ggactgcagg ggaagctcca gcttaaaatg taacatgtcc gtcttcccat cctgggttct
180
gtcttcttct ctagtcgaaa cgagcgggac gcgcaggcga tccccttgca gccagttacc
240
gcgcggggct ctgctccaaa gccgcgctgt tcctgctgct ggccgctgcg ctcacgtaca
300
tcccgcgct gctgggtggc ttccggagcc acgggttttg gctgaagcgg agcagctacg
360
aggagcagcc gaccgtgcgc ttccaacacc aggtgctgct cgtggccctg ctcggaccgg
420
aaagcgacgg gttectcgcc tggagcacgt tcccggcctt caaccggctg caaggggac
480
gcctgcgct cccctcctt tcctggagga aattatgcc gttgtgtaca gcaagacagt
540
gggtcattgt gtatgtacag aagtgatgtg gattcctccc agactcatta gtgaccaggg
600
ctgctgggcc tgtttgggtt tccctagact agagaagaag acaggaacca ggatgggaag
660
acggacatgt tacatttta gctggagctt cccctgcagt ccacggagca cgttctcggt
720
gtgcagctca tcctgacttt ctctatcga ttacacagga tggcgaccct cgtgatgcag
780
agcatggcgt ttctccagtc ctcttttct gtcccgggat cccagttata cgtgaacgga
840
gacctgaggc tgcagcagaa gcagccgctg agctgtggtg gcctagatgc ccgatacaac
900
atatccgtga tcaacgggac cagccccctt gcctatgact acgacctcac ccatattgtt
960
gctgcctacc aggagaggaa cgaaagctcc cagtgaggaa ctggtcttct ggagactctg
1020
tgtggcatag agtgattcaa ccaccttaag aagacctctg gctttcctgg aacacagatg
1080
tcgagacatc tcccatggat ttgtgatcag cgttgcagct ctcccagcag ccctggacgg
1140
tggcccccag ccgcccgcgt gtggctgcca cggttctcca gcaagacagt gacagtgtct
1200
ctcctggcac agaccacctg cctcctgctc ttcatcatct cccggccagg gccctcatcc
1260
ccagccggcg gcgaggatcg tgtgcacgtg ctggtgctgt cctcgtggcg ctcgggctca
1320
tccttcttgg gccagctctt cagccagcac cccgacgtct tctacctgat ggagcccgcg
1380
tggcatgtgt ggaccacct gtgcagggc agcgcgga cgtgcacat ggccgtgcgc
1440
gacctgatgc gctctatctt ttgtgacgac atggacgtgt ttgatgccta catggaacct
1500
gggtccccga gacagtccag cctctttcag tgggagaaca gccgggccct gtgttctgca
1560
cctgcctgtg acatcatccc acaagatgaa atcatcccc gggctcactg caggctcctg
1620
tgcagtcaac agccctttga ggtgggtggag aaggcctgcc gctcctacag ccacgtgggtg
1680

ctcaaggagg tgcgcttctt caacctgcag tccctctacc cgctgctgaa agacccctcc
 1740
 ctcaacctgc atatcgtgca cctgggtccgg gacccccggg ccgtgctgcg ctcccgggag
 1800
 gcggcgggcc cgatactggc acgcgacaac ggcacgtgctc tgggcaccaa cggcaagtgg
 1860
 gtggaggccg accctcacct gcgcctgatt cgcgaggtgt gccgcagcca cgtgcgcctc
 1920
 gccgaggccg ccacactcaa gccgccaccc ttcttgccgc gccgctaccg cctgggtgcgc
 1980
 ttcgaggacc tggcgcgagg gccgctggca gagatccgcg cactctacgc cttcacccggc
 2040
 ctgaccctca cgccacagct cgaggcctgg atccacaaca tcaccacagg gtcgggggac
 2100
 ggcaagccaa tcgaggcctt ccataacttcg tctaggaatg cgcgcaacgt ctcccaggcc
 2160
 tggcgccacg cgttgccctt cactaagatc ctgcgcgtgc aggaggtgtg cgcggcgccg
 2220
 ctgcagctgc tgggctaccg gcctgtgtac tctgcggacc agcagcgtga cctcacctcg
 2280
 gatctggtgc tgccacgagg cccagaccac ttcagctggg catcgctga ctgagaactc
 2340
 tgggccttag agcaagcccc gaactgtggt cgccaggccc aggaggcgac tgcattggtg
 2400
 agagggagct gggcgcatg ggggaagcagg tccctactat caaccgggag tttggggctc
 2460
 tcccctgaag taggcaagga ctgcacgtt ctttctctcc tgattctcgg ttttctttg
 2520
 agtcttctgg agctgccttc tcacaggtg cactcttcat ggaaagcaac tcttgccct
 2580
 acctcttctg ggcgagggga gtaagttact gctaaattaa attaaatgtg tgccaggccg
 2640
 ggtgcggtgg ctcatgcctg taatcccagc attttgagag gctgaggcgg gtggatcacc
 2700
 tgaggtcagg attcaaaacc agcctggcca acatagtga accccctctc tactaaaaat
 2760
 gcaaaaatta gtccggcgtg gtggcacact cctgtaatcc cagctactta ggaggctgag
 2820
 gtgggagaat cacttgact ccaaagggtg aggttgcagt aagctgaaat catgccactg
 2880
 caccctagct tgggtggcaa agcaaaactc tatcaaaaaa ataattaata aatttgttca
 2940
 aaagtcctgc cgaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 2988

<210> 3422

<211> 418

<212> PRT

<213> Homo sapiens

<400> 3422

Met Ser Arg His Leu Pro Trp Ile Cys Asp Gln Arg Cys Ser Ser Pro
 1 5 10 15
 Ser Ser Pro Gly Arg Trp Pro Pro Ala Ala Arg Met Trp Leu Pro Arg

```
<210> 3423
<211> 1851
```

<212> DNA

<213> Homo sapiens

<400> 3423

cgatcgagag ctccaatagc catcgggtgc cgtaccgcc actcaggtct gccttctacg
60
tctactggtt atggagcctg tctgtcactc ttctcgtcgt actaaccgc ttacccccgg
120
cgttcattgg ccgtggcctc tctagctccg cccctaggg gggtcgacct cgtaaccagt
180
gaggcgcggg ccaacctagt gcgacgtgtg ggcgtggcgg gggctggggg ctgcggggcga
240
aggtggtagc ccattggagg tcccgggagc gaagtccagc tgccgttagg cgctgggata
300
gtcgcacgct ggatgcatct acgtccgccg agcccctggg gcgaagaggc cgcgtccgcc
360
ttcagttgtg gccggtgctt cgccccctga cccttcgccc ccaaagacca gctctaactg
420
gagcgccctc gccgcccctg cccagcctcg tacacgccgc cagcctcgcc cagccggtgt
480
ccggagacct tcggggcctg tccatttgtg ggcaaagcca gcggggcagg cttggccaga
540
gtgcaccact cggcgccgct ccaggccccga cgctctgggc gcgcccggaa ccccagggtta
600
atttgagtg gcccttgag tcagtttctt acaccatccg agggcccacc cagcacgagc
660
tacagcctcc accaggaggg cctggaacct tcagcctgca ctctctcaac cctcaggaag
720
ctcagcggtg ggcagtccta gtccgaggtg ccaccgtgga aggacagaat ggcagcaaga
780
gcaactcacc accagccttg ggcccagaag catgccctgt ctccctgccc agtcccccg
840
aagcctccac actcaagggc cctccacctg aggcagatct tcctaggagc cctggaaact
900
tgacggagag agaagagctg gcagggagcc tggcccgggc tattgcaggt ggagacgaga
960
agggggcagc ccaagtggca gccgtccttg cccagcatcg tgtggccctg agtggttcagc
1020
ttcaggaggc ctgcttccca cctggcccca tcaggctgca ggtcacactt gaagacgctg
1080
cctctgccgc atccgcgcg tctctgcac acgttgccct gcaggteccac cccactgca
1140
ctgttgagc tctccaggag caggtgggca cagggtctgg ggagccctgc caggggcaga
1200
ggagcctagg tgacatcacc tgccctgatg ctctggccac aggtgttctc agagctcgg
1260
ttcccgccag ccgtgcaacg ctgggtcatc ggacgggtgcc tgtgtgtgcc tgagcgcagc
1320
cttgccctctt acgggggttc gcaggatggg gaccctgctt tctctactt gctgtcagct
1380
cctcgagaag cccagccac aggacctagc cctcagcacc ccagaagat ggacggggaa
1440
cttgagcgtg tggttcccc atcattgggg ctacccccag gccccagcc agctgcctcc
1500

agcctgcccc gtccactcca gccagctgg tcctgtcctt cctgcacctt catcaatgcc
 1560
 ccagaccgcc ctggctgtga gatgtgtagc acccagaggc cctgcacttg ggacccccctt
 1620
 gctgcagctt ccacctagca gccaccagag gttacaaggg gagagtggcc cttccctcac
 1680
 aagtccgaca tctccaggcc cccactgaac tccggggacc tctactgact gcttgctggg
 1740
 acagtcacca ggggtggggg gaagggccac aaaatgaaac cattaagac ccttaagagc
 1800
 caaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa a
 1851

<210> 3424

<211> 136

<212> PRT

<213> Homo sapiens

<400> 3424

Met	Leu	Trp	Pro	Gln	Val	Phe	Ser	Glu	Leu	Gly	Phe	Pro	Pro	Ala	Val
1				5					10					15	
Gln	Arg	Trp	Val	Ile	Gly	Arg	Cys	Leu	Cys	Val	Pro	Glu	Arg	Ser	Leu
			20					25					30		
Ala	Ser	Tyr	Gly	Val	Arg	Gln	Asp	Gly	Asp	Pro	Ala	Phe	Leu	Tyr	Leu
		35					40					45			
Leu	Ser	Ala	Pro	Arg	Glu	Ala	Pro	Ala	Thr	Gly	Pro	Ser	Pro	Gln	His
	50					55					60				
Pro	Gln	Lys	Met	Asp	Gly	Glu	Leu	Gly	Arg	Leu	Phe	Pro	Pro	Ser	Leu
65					70				75					80	
Gly	Leu	Pro	Pro	Gly	Pro	Gln	Pro	Ala	Ala	Ser	Ser	Leu	Pro	Ser	Pro
				85					90					95	
Leu	Gln	Pro	Ser	Trp	Ser	Cys	Pro	Ser	Cys	Thr	Phe	Ile	Asn	Ala	Pro
			100					105					110		
Asp	Arg	Pro	Gly	Cys	Glu	Met	Cys	Ser	Thr	Gln	Arg	Pro	Cys	Thr	Trp
		115					120						125		
Asp	Pro	Leu	Ala	Ala	Ala	Ser	Thr								
		130				135									

<210> 3425

<211> 1416

<212> DNA

<213> Homo sapiens

<400> 3425

tccggcggaa agggctctttg ctgctgcgcc cgggcagggg ctgccgcggc cccaggtccc
 60
 gcttcgagac gcggcgcggt ccaggcggga ggcgactccc taggaaggga cccggggcgg
 120
 gaggaggaag tgaggccgcg cggaagggaag gcggcgagcc ccggggcccc gaggccttgg
 180
 ccgcgtcaca gcacccacat ggcctctgga gtgggcgcgg ccttcgagga actgcctcac
 240
 gacggcacgt gtgacgagtg cgagcccgac gaggtccgg gggccgagga agtgtgccga
 300

gaatgcggct tctgctactg ccgccgccat gccgagggcg acaggcagaa gttcctcagt
 360
 caccatctgg ccgaatacgt ccacggctcc caggcctgga ccccgccagc tgacggagag
 420
 ggggcgggga aggaagaagc ggaggtcaag gtggagcagg agagggagat agaaagcgag
 480
 gcaggggaag agagtgagtc ggaggaagag agcgagtcag aggaagagag cgagacagag
 540
 gaagagagtg aggatgagag cgatgaggag agtgaagaag acagcgagga agaaatggag
 600
 gatgagcaag aaagcgaggc cgaagaagac aaccaagaag aaggggaatc cgaggcggag
 660
 ggagaaactg aggcagaaag tgaatttgac ccagaaatag aaatggaagc agagagagtg
 720
 gccaaagagga agtgtccgga ccatgggctt gatttgagta cctattgcc a ggaagatagg
 780
 cagctcatct gtgtcctgtg tccagtcatt ggggctcacc agggccacca actctccacc
 840
 ctagacgaag cctttgaaga attaagaagc aaagactcag gtggactgaa ggccgctatg
 900
 atcgaattgg tggaaagggt gaagttcaag agctcagacc ctaaagtaac tcgggaccaa
 960
 atgaagatgt ttatacagca ggaatttaag aaagttcaga aagtgattgc tgatgaggag
 1020
 cagaaggccc ttcacttagt ggacatccaa gaggcaatgg ccacagctca tgtgactgag
 1080
 atactggcag acatccaatc ccacatggat aggttgatga ctcatgaggc ccaagccaag
 1140
 gaacaacttg atacctctaa tgaatcagct gagccaaagg cagagggcga tgaggaagga
 1200
 cccagtgggtg ccagtgaaga agaggacaca tgaaggcttg ctacccccag tgaaaatcat
 1260
 cccctcccct tgtgtgtatg tgacagcgtg tatgtaacgg cttctgattt ctgtgaaagc
 1320
 tgctcagcaa caaacgtact tccaccagat gtgtccccag atccacagca ggcacatatc
 1380
 tctccaaggg atgaccagtt ttatgettac tgtgtg
 1416

<210> 3426

<211> 410

<212> PRT

<213> Homo sapiens

<400> 3426

Ser	Gly	Gly	Lys	Gly	Leu	Cys	Cys	Cys	Ala	Arg	Ala	Gly	Ala	Ala	Ala
1				5					10					15	
Ala	Pro	Gly	Pro	Ala	Ser	Arg	Arg	Gly	Ala	Val	Gln	Ala	Gly	Gly	Asp
			20					25					30		
Ser	Leu	Gly	Arg	Asp	Pro	Gly	Arg	Glu	Glu	Glu	Val	Arg	Pro	Arg	Gly
		35				40					45				
Arg	Lys	Ala	Ala	Ser	Pro	Gly	Ala	Pro	Arg	Pro	Trp	Pro	Arg	His	Ser
	50					55					60				
Thr	His	Met	Ala	Ser	Gly	Val	Gly	Ala	Ala	Phe	Glu	Glu	Leu	Pro	His

65					70					75					80
Asp	Gly	Thr	Cys	Asp	Glu	Cys	Glu	Pro	Asp	Glu	Ala	Pro	Gly	Ala	Glu
				85					90					95	
Glu	Val	Cys	Arg	Glu	Cys	Gly	Phe	Cys	Tyr	Cys	Arg	Arg	His	Ala	Glu
			100					105					110		
Ala	His	Arg	Gln	Lys	Phe	Leu	Ser	His	His	Leu	Ala	Glu	Tyr	Val	His
		115					120					125			
Gly	Ser	Gln	Ala	Trp	Thr	Pro	Pro	Ala	Asp	Gly	Glu	Gly	Ala	Gly	Lys
	130					135					140				
Glu	Glu	Ala	Glu	Val	Lys	Val	Glu	Gln	Glu	Arg	Glu	Ile	Glu	Ser	Glu
145					150					155					160
Ala	Gly	Glu	Glu	Ser	Glu	Ser	Glu	Glu	Glu	Ser	Glu	Ser	Glu	Glu	Glu
				165					170					175	
Ser	Glu	Thr	Glu	Glu	Glu	Ser	Glu	Asp	Glu	Ser	Asp	Glu	Glu	Ser	Glu
		180						185					190		
Glu	Asp	Ser	Glu	Glu	Glu	Met	Glu	Asp	Glu	Gln	Glu	Ser	Glu	Ala	Glu
	195						200					205			
Glu	Asp	Asn	Gln	Glu	Glu	Gly	Glu	Ser	Glu	Ala	Glu	Gly	Glu	Thr	Glu
	210					215					220				
Ala	Glu	Ser	Glu	Phe	Asp	Pro	Glu	Ile	Glu	Met	Glu	Ala	Glu	Arg	Val
225					230					235					240
Ala	Lys	Arg	Lys	Cys	Pro	Asp	His	Gly	Leu	Asp	Leu	Ser	Thr	Tyr	Cys
			245						250					255	
Gln	Glu	Asp	Arg	Gln	Leu	Ile	Cys	Val	Leu	Cys	Pro	Val	Ile	Gly	Ala
		260						265					270		
His	Gln	Gly	His	Gln	Leu	Ser	Thr	Leu	Asp	Glu	Ala	Phe	Glu	Glu	Leu
		275					280					285			
Arg	Ser	Lys	Asp	Ser	Gly	Gly	Leu	Lys	Ala	Ala	Met	Ile	Glu	Leu	Val
	290					295					300				
Glu	Arg	Leu	Lys	Phe	Lys	Ser	Ser	Asp	Pro	Lys	Val	Thr	Arg	Asp	Gln
305					310					315					320
Met	Lys	Met	Phe	Ile	Gln	Gln	Glu	Phe	Lys	Lys	Val	Gln	Lys	Val	Ile
			325						330					335	
Ala	Asp	Glu	Glu	Gln	Lys	Ala	Leu	His	Leu	Val	Asp	Ile	Gln	Glu	Ala
		340						345					350		
Met	Ala	Thr	Ala	His	Val	Thr	Glu	Ile	Leu	Ala	Asp	Ile	Gln	Ser	His
	355						360					365			
Met	Asp	Arg	Leu	Met	Thr	Gln	Met	Ala	Gln	Ala	Lys	Glu	Gln	Leu	Asp
	370					375					380				
Thr	Ser	Asn	Glu	Ser	Ala	Glu	Pro	Lys	Ala	Glu	Gly	Asp	Glu	Glu	Gly
385					390					395					400
Pro	Ser	Gly	Ala	Ser	Glu	Glu	Glu	Asp	Thr						
				405					410						

<210> 3427

<211> 580

<212> DNA

<213> Homo sapiens

<400> 3427

ggatcccttc tcttcaaaat tgtagacgcg tctccgagtc ctttcaactca tcggaggctg
60

cctggatttca atgtcatagt tcccattgtc aatgacatca tcggagaact tgacctgctg
120

gggctctggat tgagacttgg accttctgag cactggcaga tgtactggct tctcttcagg
 180
 caggattttc tctggacaca actctgaact tagactcttt aaggactctg cactcctgtg
 240
 cagcatggaa gagttcaaag ttcccatatt gctcatcttc tcacaatctt ctgtttccat
 300
 ctctcaaaa ttttgcagag aatacaatga tggccttggc ttgttttctc catccaccga
 360
 agccctgtg atattggaca atgccaaaga atccatcgaa tcccgaacac tttgctctgg
 420
 tttcaggtct gacagacact ccaggggaatc ttcataccac tgtgtttcat catgattata
 480
 ccctgaagcc ccatgggtcca gttccaattc ctgaagcctt ctactgcttg cagggcctgg
 540
 gtggctgcca taagcagaat cgcccagtc atcttgtgac
 580

<210> 3428

<211> 132

<212> PRT

<213> Homo sapiens

<400> 3428

Met	Asp	Ser	Leu	Ala	Leu	Ser	Asn	Ile	Thr	Gly	Ala	Ser	Val	Asp	Gly
1				5					10					15	
Glu	Asn	Lys	Pro	Arg	Pro	Ser	Leu	Tyr	Ser	Leu	Gln	Asn	Phe	Glu	Glu
			20					25					30		
Met	Glu	Thr	Glu	Asp	Cys	Glu	Lys	Met	Ser	Asn	Met	Gly	Thr	Leu	Asn
		35					40					45			
Ser	Ser	Met	Leu	His	Arg	Ser	Ala	Glu	Ser	Leu	Lys	Ser	Leu	Ser	Ser
		50				55					60				
Glu	Leu	Cys	Pro	Glu	Lys	Ile	Leu	Pro	Glu	Glu	Lys	Pro	Val	His	Leu
65					70					75					80
Pro	Val	Leu	Arg	Arg	Ser	Lys	Ser	Gln	Ser	Arg	Pro	Gln	Gln	Val	Lys
				85				90						95	
Phe	Ser	Asp	Asp	Val	Ile	Asp	Asn	Gly	Asn	Tyr	Asp	Ile	Glu	Ile	Arg
			100					105					110		
Gln	Pro	Pro	Met	Ser	Glu	Arg	Thr	Arg	Arg	Arg	Val	Tyr	Asn	Phe	Glu
			115				120					125			
Glu	Arg	Gly	Ser												
			130												

<210> 3429

<211> 634

<212> DNA

<213> Homo sapiens

<400> 3429

cccggggggc tgggagggga ggcacagtct ggtctgcact gaggtaggcc gccgtggaga
 60
 aggggaaggga gccggcagct ggatgtggca ggatgatttc tcctgagagt agccctcgcg
 120
 gtcagcttcc ttttcatact ttcccggcgt tctctccacg agcaggtgca ccagggacct
 180

gtccctctgt cctacacggt caccacagtg acgaccaag gcttcccctt gcctacaggc
 240
 cagcacatcc ctggctgcag tgcccagcag ctcccagcat gctccgtgat gttcagtggg
 300
 cagcattacc ccctctgctg cctcccgcgc ccgcttatcc aggcgctgcac catgcagcag
 360
 ctgcctgtgc cctatcaggc ctacccccac ctcatctcca gtgaccacta catcctgcac
 420
 ccccaccac cgggcacaca cccagcagct ccagggtctg tataagaaac cctgtggaag
 480
 gccatccct gtcctaggcc acccaggcag gacactccac tgtaaggcc cacagcctca
 540
 actcctgggc ctctgccaag ctgtgaggca ggtacagggg tactggaagg ttcctgaacc
 600
 ttgaaacact ctattaccaa atgtgaacac gcgt
 634

<210> 3430

<211> 122

<212> PRT

<213> Homo sapiens

<400> 3430

Phe	Leu	Leu	Arg	Val	Ala	Leu	Ala	Val	Ser	Phe	Leu	Phe	Ile	Leu	Ser
1				5					10					15	
Arg	Arg	Ser	Leu	His	Glu	Gln	Val	His	Gln	Gly	Pro	Val	Pro	Leu	Ser
			20					25					30		
Tyr	Thr	Val	Thr	Thr	Val	Thr	Thr	Gln	Gly	Phe	Pro	Leu	Pro	Thr	Gly
		35				40						45			
Gln	His	Ile	Pro	Gly	Cys	Ser	Ala	Gln	Gln	Leu	Pro	Ala	Cys	Ser	Val
	50					55				60					
Met	Phe	Ser	Gly	Gln	His	Tyr	Pro	Leu	Cys	Cys	Leu	Pro	Pro	Pro	Leu
65					70					75					80
Ile	Gln	Ala	Cys	Thr	Met	Gln	Gln	Leu	Pro	Val	Pro	Tyr	Gln	Ala	Tyr
				85				90					95		
Pro	His	Leu	Ile	Ser	Ser	Asp	His	Tyr	Ile	Leu	His	Pro	Pro	Pro	Pro
			100					105					110		
Gly	Thr	His	Pro	Ala	Ala	Pro	Gly	Ser	Val						
		115					120								

<210> 3431

<211> 1396

<212> DNA

<213> Homo sapiens

<400> 3431

tgcagctcgg cctctgctgc ctgccggtgc tcttcgtggc tctgggcatg gcacgcggacc
 60
 ccattcttcac gctggcgccc ccgctgcatt gccactacgg ggccttcccc cctaattgcct
 120
 ctgcgtggga gcagcgtccc aatgccagcg cgtcacgtcg ccagcgtgc cctagcacgc
 180
 agcgcgcgca gccgtgtcgc caacagtacc aaatcgtcgt gcagcggcctt cgccccgcgc
 240

gacttcaacc attgcctcaa ggattgggac tataatggcc ttctgtgct caccaccaac
 300
 gccatcggcc agtgggatct ggtgtgtgac ctgggctggc aggtgatcct ggagcagatc
 360
 ctcttcatct tgggctttgc ctccggctac ctgttctctg gttaccccg agacagattt
 420
 ggccgtcgcg ggattgtgct gctgaccttg gggctgggtg gcccctgtgg agtaggaggg
 480
 gctgctgcag gctcctccac aggcgtcatg gccctccgat tctcttggg ctttctgctt
 540
 gccggtgttg acctgggtgt ctacctgatg cgcctggagc tgtgcgacct aaccagagg
 600
 ctccgggttg cctggcagg ggagttggtg ggggtgggag ggcacttctt gttcctgggc
 660
 ctggcccttg tctctaagga ttggcgattc ctacagcgaa tgatcaccgc tccctgcac
 720
 ctcttctgt tttatggctg gcctgggttg ttctggagt ccgcacggtg gctgatagt
 780
 aagcggcaga ttgaggaggc tcagtctgtg ctgaggatcc tggctgagcg aaaccggccc
 840
 catgggcaga tgctggggga ggaggcccag gaggccctgc aggacctgga gaatacctgc
 900
 cctctccctg caacatcctc cttttccttt gcttccctcc tcaactaccg caacatctgg
 960
 aaaaatctgc ttatcctggg cttcaccaac ttcattgcc atgccattcg ccactgctac
 1020
 cagcctgtgg gaggaggagg gagcccatcg gacttctacc tgtgctctct gctggccagc
 1080
 ggcaccgcag ccttgacctg tgtcttcttg ggggtcaccg tggaccgatt tggccgccc
 1140
 ggcacccctc ttctctccat gacccttacc ggcattgctt ccttggtcct gctgggacct
 1200
 tgggattgtg agcatcctat cttccccaca gtgtgggctc aacaaggga ccccaacaga
 1260
 gatctgaacg aggctgcat caccactttc tctgtccttg ggctcttctc ctcccaagct
 1320
 gccgccatcc tcagcacct ccttgetgct gaggtcatcc ccaccactgt cgggggccgt
 1380
 ggccctgggc tgatca
 1396

<210> 3432

<211> 296

<212> PRT

<213> Homo sapiens

<400> 3432

Met Ala Leu Arg Phe Leu Leu Gly Phe Leu Leu Ala Gly Val Asp Leu
 1 5 10 15
 Gly Val Tyr Leu Met Arg Leu Glu Leu Cys Asp Pro Thr Gln Arg Leu
 20 25 30
 Arg Val Ala Leu Ala Gly Glu Leu Val Gly Val Gly His Phe Leu
 35 40 45
 Phe Leu Gly Leu Ala Leu Val Ser Lys Asp Trp Arg Phe Leu Gln Arg

50		55		60											
Met	Ile	Thr	Ala	Pro	Cys	Ile	Leu	Phe	Leu	Phe	Tyr	Gly	Trp	Pro	Gly
65					70					75				80	
Leu	Phe	Leu	Glu	Ser	Ala	Arg	Trp	Leu	Ile	Val	Lys	Arg	Gln	Ile	Glu
				85					90					95	
Glu	Ala	Gln	Ser	Val	Leu	Arg	Ile	Leu	Ala	Glu	Arg	Asn	Arg	Pro	His
			100					105					110		
Gly	Gln	Met	Leu	Gly	Glu	Glu	Ala	Gln	Glu	Ala	Leu	Gln	Asp	Leu	Glu
	115						120					125			
Asn	Thr	Cys	Pro	Leu	Pro	Ala	Thr	Ser	Ser	Phe	Ser	Phe	Ala	Ser	Leu
	130					135					140				
Leu	Asn	Tyr	Arg	Asn	Ile	Trp	Lys	Asn	Leu	Leu	Ile	Leu	Gly	Phe	Thr
145				150					155					160	
Asn	Phe	Ile	Ala	His	Ala	Ile	Arg	His	Cys	Tyr	Gln	Pro	Val	Gly	Gly
			165					170						175	
Gly	Gly	Ser	Pro	Ser	Asp	Phe	Tyr	Leu	Cys	Ser	Leu	Leu	Ala	Ser	Gly
		180						185					190		
Thr	Ala	Ala	Leu	Ala	Cys	Val	Phe	Leu	Gly	Val	Thr	Val	Asp	Arg	Phe
	195					200						205			
Gly	Arg	Arg	Gly	Ile	Leu	Leu	Leu	Ser	Met	Thr	Leu	Thr	Gly	Ile	Ala
	210			215					220						
Ser	Leu	Val	Leu	Leu	Gly	Leu	Trp	Asp	Cys	Glu	His	Pro	Ile	Phe	Pro
225				230					235					240	
Thr	Val	Trp	Ala	Gln	Gln	Gly	Asn	Pro	Asn	Arg	Asp	Leu	Asn	Glu	Ala
			245					250						255	
Ala	Ile	Thr	Thr	Phe	Ser	Val	Leu	Gly	Leu	Phe	Ser	Ser	Gln	Ala	Ala
		260					265						270		
Ala	Ile	Leu	Ser	Thr	Leu	Leu	Ala	Ala	Glu	Val	Ile	Pro	Thr	Thr	Val
	275					280						285			
Arg	Gly	Arg	Gly	Leu	Gly	Leu	Ile								
	290					295									

<210> 3433

<211> 1257

<212> DNA

<213> Homo sapiens

<400> 3433

tgagctacac gcggagcngg gccgcaacag cggctcctcc cttcggccca gaggcccagc
 60
 tcagtgcgcc cttcaccttc acctcgacct ctgccgggag ggagacagcg tccgcagaga
 120
 ccgagccact cccgttccca caccaggtcg aacttgaaaa gggacgtcgc ccacctgtac
 180
 cgaggagtcg gctcgcgcta catcatgggg tcaggagaat cttcatgca gctgcagcag
 240
 cgtctcctga gagagaagga ggccaagatc aggaaggcct tggacaggct tcgcaagaag
 300
 aggcacctgc tccgccggca gcggacgagg cgggagttcc ccgtgatctc cgtggtgggg
 360
 tacaccaact gcggtgagca cgcgcccagg ggaggggcct tccgcggtct ccgtgtcacc
 420
 ggtgaggact cgcccggggg agggcagggg gtccctgtcg tctcagtggt gccgtacgac
 480

agctgcggtg agcacgtgcc caggagaggg ggttcccatg gtcgccgtgt ggggtacacc
 540
 agctgctgtg agagctcacc caggagacgg gtttcctgtg gtctctgtgt ggggtacagc
 600
 agccaaggtg aggatgtcat ctaccccatc ctcccatcca gagctttacc accctgtcta
 660
 taccacaacc tcccctccat ctacaccatc ctctgtcta gaccatcccc actgcctat
 720
 ctataccacc accctgtcta cacaatccac ccatctacac catcacctct cctctgtcta
 780
 taccatctc ctgtctacac cagcaccact accccatcta taccaccacc cgtctacat
 840
 aatccacccg tgtacaccac aatgtccctc tegtctgcac cgtcctctg tctacactgg
 900
 caccactgcc ccagctatac caccaccccg tctacataat ccacccatct gtctacacca
 960
 tcgctctcc tctgtctaca ccatccttct gtcaacacccg gcaccactgc cgtatctata
 1020
 tccacccatc tacaccatca cctcccctgt gtctacacca tctcccatc cacaccagca
 1080
 ccaccacccc acctacacca tcccaccatc tacgccattg ccaaattctac acagacgacc
 1140
 tcaatcccat ccacgccttc acacgcacac ccgtccacac caccatctcc cccgtgtccg
 1200
 cagggcggcc ccgtccatc ggcccagaaa cagcgacggg ggctttgtcc cagcgt
 1257

<210> 3434

<211> 311

<212> PRT

<213> Homo sapiens

<400> 3434

Ala	Thr	Arg	Gly	Ala	Gly	Pro	Gln	Gln	Arg	Leu	Leu	Pro	Ser	Ala	Gln
1				5					10					15	
Arg	Pro	Ser	Ser	Val	Pro	Pro	Ser	Pro	Ser	Pro	Arg	Pro	Leu	Pro	Gly
		20						25					30		
Gly	Arg	Gln	Arg	Pro	Gln	Arg	Pro	Ser	His	Ser	Arg	Ser	His	Thr	Arg
		35					40					45			
Ser	Asn	Leu	Lys	Arg	Asp	Val	Ala	His	Leu	Tyr	Arg	Gly	Val	Gly	Ser
	50					55					60				
Arg	Tyr	Ile	Met	Gly	Ser	Gly	Glu	Ser	Phe	Met	Gln	Leu	Gln	Gln	Arg
65					70					75					80
Leu	Leu	Arg	Glu	Lys	Glu	Ala	Lys	Ile	Arg	Lys	Ala	Leu	Asp	Arg	Leu
			85						90					95	
Arg	Lys	Lys	Arg	His	Leu	Leu	Arg	Arg	Gln	Arg	Thr	Arg	Arg	Glu	Phe
			100						105					110	
Pro	Val	Ile	Ser	Val	Val	Gly	Tyr	Thr	Asn	Cys	Gly	Glu	His	Ala	Pro
		115					120					125			
Arg	Gly	Gly	Ala	Phe	Arg	Gly	Leu	Arg	Val	Thr	Gly	Glu	Asp	Ser	Pro
		130					135					140			
Gly	Gly	Gly	Gln	Gly	Val	Pro	Val	Val	Ser	Val	Val	Pro	Tyr	Asp	Ser
145					150					155					160
Cys	Gly	Glu	His	Val	Pro	Arg	Arg	Gly	Gly	Ser	His	Gly	Arg	Arg	Val

				165					170					175			
Gly	Tyr	Thr	Ser	Cys	Cys	Glu	Ser	Ser	Pro	Arg	Arg	Arg	Val	Ser	Cys		
			180					185					190				
Gly	Leu	Cys	Val	Gly	Tyr	Ser	Ser	Gln	Gly	Glu	Asp	Val	Ile	Tyr	Pro		
		195				200						205					
Ile	Leu	Pro	Ser	Arg	Ala	Leu	Pro	Pro	Cys	Leu	Tyr	His	Asn	Leu	Pro		
	210					215					220						
Ser	Ile	Tyr	Thr	Ile	Leu	Leu	Ser	Arg	Pro	Ser	Pro	Leu	Pro	Tyr	Leu		
225					230					235					240		
Tyr	His	His	Pro	Val	Tyr	Thr	Ile	His	Pro	Ser	Thr	Pro	Ser	Pro	Leu		
				245				250						255			
Leu	Cys	Leu	Tyr	His	Pro	Pro	Val	Tyr	Thr	Ser	Thr	Thr	Thr	Thr	Pro	Ser	
		260					265						270				
Ile	Pro	Pro	Pro	Arg	Leu	His	Asn	Pro	Pro	Val	Tyr	Thr	Thr	Met	Ser		
	275					280					285						
Pro	Ser	Ser	Ala	Pro	Ser	Ser	Cys	Leu	His	Trp	His	His	Cys	Pro	Ser		
	290				295					300							
Tyr	Thr	Thr	Thr	Pro	Ser	Thr											
305					310												

<210> 3435

<211> 1225

<212> DNA

<213> Homo sapiens

<400> 3435

```

nnccactcct tgtatgacca ctggggcaag gaggatgaga acctgggtag cgtgaagcag
60
tatgtggaga gcatagacgt ttcctcctac acggaggagt tcaacgtgtc ctgcctgaca
120
gacagcaatg ccgataccta ctgggagagc gatgggtccc agtgccaaca ctgggtacgg
180
cttactatga agaagggcac cattgtcaag aagctgctac tcgcagtgga taccacagat
240
gacaacttta tgccaaagcg ggtgggtggtc tatgggggtg aaggggacaa cctgaagaag
300
ctgagtgcag tgagcattga cnngagaccc tcatcggggn atgtctgtgt cctggaggac
360
atgaccgtcc acctcccgat catcgagatc cgcacgtgg agtgccgaga tgatgggatt
420
gatgttcgtc tccgaggggt caagatcaag tcatctagac agcgggaact agggttgaat
480
gcagacctgt tccagccaac tagtctggtg cgatatccac gcctagaagg caccgaccct
540
gaagtactgt accgcagagc tgtcctcctg cagagattca tcaagatcct cgatagtgtc
600
ctgcaccacc tggtaacctg ctgggaccac aactgggca ctttcagtga gattaagcaa
660
gtgaagcagt tcctactget gtcccgccag cggccaggcc tgggtggctca gtgcctgcgt
720
gactctgaga gcagcaagcc cagcttcatg ccacgcctat acatcaaccg ccgtcttgcc
780
atggaacacc gtgcctgccc ctctcgagac cctgcctgca agaatgcagt cttcaccag
840

```

gtatatgaag gcctcaagcc ctctgacaaa tatgaaaagc ccctggacta caggtggccc
 900
 atgcgctatg accagtgggtg ggagtgtaaa tttattgcag aaggcatcat tgaccaaggg
 960
 ggtgggtttcc gggacagcct ggcagatatg tcagaagagc tgtgccctag ctcagcggat
 1020
 acccccgtgc ccctgccctt ctttgtacgc acagccaacc agggcaatgg cactgggtgag
 1080
 gctcgggaca tgtatgtacc caaccctcc tgccgagact ttgccaagta tgaatggatc
 1140
 ggacagctga tgggggctgc ccttcggggg aaggagttcc tggtcctggc cctgcctggg
 1200
 tttgtgtgga agcagctttc tgcag
 1225

<210> 3436

<211> 408

<212> PRT

<213> Homo sapiens

<400> 3436

Xaa	His	Ser	Leu	Tyr	Asp	His	Trp	Gly	Lys	Glu	Asp	Glu	Asn	Leu	Gly
1				5					10					15	
Ser	Val	Lys	Gln	Tyr	Val	Glu	Ser	Ile	Asp	Val	Ser	Ser	Tyr	Thr	Glu
			20					25					30		
Glu	Phe	Asn	Val	Ser	Cys	Leu	Thr	Asp	Ser	Asn	Ala	Asp	Thr	Tyr	Trp
		35					40					45			
Glu	Ser	Asp	Gly	Ser	Gln	Cys	Gln	His	Trp	Val	Arg	Leu	Thr	Met	Lys
	50					55					60				
Lys	Gly	Thr	Ile	Val	Lys	Lys	Leu	Leu	Leu	Ala	Val	Asp	Thr	Thr	Asp
65					70					75					80
Asp	Asn	Phe	Met	Pro	Lys	Arg	Val	Val	Val	Tyr	Gly	Gly	Glu	Gly	Asp
				85					90					95	
Asn	Leu	Lys	Lys	Leu	Ser	Asp	Val	Ser	Ile	Asp	Xaa	Arg	Pro	Ser	Ser
			100					105					110		
Gly	Xaa	Val	Cys	Val	Leu	Glu	Asp	Met	Thr	Val	His	Leu	Pro	Ile	Ile
		115					120					125			
Glu	Ile	Arg	Ile	Val	Glu	Cys	Arg	Asp	Asp	Gly	Ile	Asp	Val	Arg	Leu
	130					135				140					
Arg	Gly	Val	Lys	Ile	Lys	Ser	Ser	Arg	Gln	Arg	Glu	Leu	Gly	Leu	Asn
145					150					155					160
Ala	Asp	Leu	Phe	Gln	Pro	Thr	Ser	Leu	Val	Arg	Tyr	Pro	Arg	Leu	Glu
			165						170					175	
Gly	Thr	Asp	Pro	Glu	Val	Leu	Tyr	Arg	Arg	Ala	Val	Leu	Leu	Gln	Arg
		180					185						190		
Phe	Ile	Lys	Ile	Leu	Asp	Ser	Val	Leu	His	His	Leu	Val	Pro	Ala	Trp
	195						200					205			
Asp	His	Thr	Leu	Gly	Thr	Phe	Ser	Glu	Ile	Lys	Gln	Val	Lys	Gln	Phe
	210					215					220				
Leu	Leu	Leu	Ser	Arg	Gln	Arg	Pro	Gly	Leu	Val	Ala	Gln	Cys	Leu	Arg
225					230					235					240
Asp	Ser	Glu	Ser	Ser	Lys	Pro	Ser	Phe	Met	Pro	Arg	Leu	Tyr	Ile	Asn
				245					250					255	
Arg	Arg	Leu	Ala	Met	Glu	His	Arg	Ala	Cys	Pro	Ser	Arg	Asp	Pro	Ala

	260		265		270										
Cys	Lys	Asn	Ala	Val	Phe	Thr	Gln	Val	Tyr	Glu	Gly	Leu	Lys	Pro	Ser
	275						280					285			
Asp	Lys	Tyr	Glu	Lys	Pro	Leu	Asp	Tyr	Arg	Trp	Pro	Met	Arg	Tyr	Asp
	290					295					300				
Gln	Trp	Trp	Glu	Cys	Lys	Phe	Ile	Ala	Glu	Gly	Ile	Ile	Asp	Gln	Gly
305					310					315				320	
Gly	Gly	Phe	Arg	Asp	Ser	Leu	Ala	Asp	Met	Ser	Glu	Glu	Leu	Cys	Pro
			325					330					335		
Ser	Ser	Ala	Asp	Thr	Pro	Val	Pro	Leu	Pro	Phe	Phe	Val	Arg	Thr	Ala
		340						345				350			
Asn	Gln	Gly	Asn	Gly	Thr	Gly	Glu	Ala	Arg	Asp	Met	Tyr	Val	Pro	Asn
	355				360						365				
Pro	Ser	Cys	Arg	Asp	Phe	Ala	Lys	Tyr	Glu	Trp	Ile	Gly	Gln	Leu	Met
	370				375						380				
Gly	Ala	Ala	Leu	Arg	Gly	Lys	Glu	Phe	Leu	Val	Leu	Ala	Leu	Pro	Gly
385				390					395					400	
Phe	Val	Trp	Lys	Gln	Leu	Ser	Ala								
				405											

<210> 3437

<211> 2081

<212> DNA

<213> Homo sapiens

<400> 3437

gtggccccag aaaagtcagt gtgtaggcct cagccacttc aggtccggcg tacattctcc
 60
 ctggacacca tcctcagctc ctaccttctg ggccagtgca cgagatgctg atggggcctt
 120
 cacctgctgc accatcgaca aggccaccca gacgccctg tcctggcaag agctagaagg
 180
 tgagcgtgcc agttcctgtg cacacaagcg ctcagcatcc tggggcagca cagaccaccg
 240
 aaaagagatt tccaagttga agcaacaact gcagaggacg aagctgagcc gcagtgggaa
 300
 agagaaggag cgaggttcac cactcctagg ggaccacgca gtgcggggag cactgagggc
 360
 gtccccctcc agcttccccct cagggtcccc tgtcttgca ctcagccctt gcctgcacag
 420
 gagcctggaa gggctcaacc aagagctgga ggaggtatct gtgaaggagc agggagaaga
 480
 ggagctgctg aggatccttg atatccctga tgggcaccgg gcccagctc ctccccagag
 540
 tggcagctgt gatcatcccc tcctctctct gagcctggca accttgccag ctctccttcc
 600
 atgtccttgg catctcccca gcctgtggcc tggccagtca tgaggaacat cgggggtgccg
 660
 ccgaggagct ggcattccacc cccaacgaca aagcctcctc tccaggacac ccagcctttc
 720
 ttgaagatgg cagcccatct ccagtccttg cctttgctgc cccccctga cctaatacata
 780
 gctacatctt caaacgggag cccccagaag gctgtgagaa agtgcgtgtg tttgaagaag
 840

ccancgtctc caggtcctga cctggccttc ctgacttcct gtcctgacaa gaacaaagtc
 900
 catttcaacc cgactggctc accttctgcc ccgtcaacct gatgaagccc ctcttccccg
 960
 gcatgggctt catctcgtaa ctgcccctca aaccgggat ctccccctcc cccggccagc
 1020
 cccaggccac cacctcggaa ggatccggaa gcctccaagg cctccccact gccattcgag
 1080
 ccattggcagc gcacccacc atcagaagag cctgtgcttt tccagagctc cctgatggtc
 1140
 tgagggtccc acccctgccc cactttacca tagagaccag tgccttggtg gcaggtcctt
 1200
 cccaggtcc cctgagatgg ggtatggagg ggcccttccc tctcggcctt cgagcacttt
 1260
 ctttcaactta ctgtgtcaaa gccctgggtc ctctttttga tgggcaccgg cccctctgaa
 1320
 cgtgatggga cctgccttct ccactagtag ctgggcagct cacaattcac acctgtgtac
 1380
 ctgccacatc cctcacttgg tggaaaacac ccagaaggtc ttgagtcccc caccctggg
 1440
 tgtcagtcca aatgactgta taggaggccc ttatttttgt cacagagcaa gctggccatg
 1500
 aacgaaggag agaagacgcc acagatttcc ttccctctcc tccaggagac cataagatag
 1560
 atcccccatc ctctcagccc tattcccatg cctccctctc attggaggag ctgaccaaag
 1620
 cagccctaac gggccataac acttgaccaa ttcagctgct ggcagaggga ggaaacaagt
 1680
 gttttcccaa gtggcatttt catctcgctt tcacctgac taaagattgt cttaagtagc
 1740
 agcccagccc gccagcccc aggtgggtag tggggaggag agctggcatt cctccaggtg
 1800
 gcaaatggcg actctatact ctccgcccgc cccagggctg gatggattag aaaaatgcct
 1860
 atttttcttg tatcgatgta gagactctat tttctcccaa agacactatt tttgcagctg
 1920
 tttgaagttt gtatattttc cgtactgcag agcttacaca aaattgaaga atgttaatgt
 1980
 tcgagttttc ttatcttggtg tttagaggtt gttttttgca gatcttggtg ttaatagacc
 2040
 aaataaataa ataaatattc ccagcaaaaa aaaaaaaaaa a
 2081

<210> 3438

<211> 105

<212> PRT

<213> Homo sapiens

<400> 3438

Ala	Cys	Gln	Phe	Leu	Cys	Thr	Gln	Ala	Leu	Ser	Ile	Leu	Gly	Gln	His
1				5				10					15		
Arg	Pro	Pro	Lys	Arg	Asp	Phe	Gln	Val	Glu	Ala	Thr	Thr	Ala	Glu	Asp
			20				25						30		
Glu	Ala	Glu	Pro	Gln	Trp	Glu	Arg	Glu	Gly	Ala	Arg	Phe	Thr	Thr	Pro

```

<400> 3439
acgcgtccac cattagcgag ccggctccgg ctaatacaaa tatttactgg gcggctctga
60
ctcaccgcgc ctcgcctcgc tccgccggcg ccgcggcatg ctgggatatg tagtccccac
120
ggggcgccgg gcgccccggg ggagcggggc cggcaccccta ggggacgcaa agccccggga
180
aggggcccggc ggaggggaggc cggagcgggc agcgcggcgg cgccatgtcc gtgaacatgg
240
acgagctcaa gcaccaggtc atgatcaacc agttcgtgct gacggcgggc tgcgcggccg
300
accaggcgaa gcaactgctg caggcggccc actggcagtt cgagacagcc ctcagcgcct
360
ttttccagga gaccaacatc ccctacagcc accatcacca ccagatgatg tgcacccccg
420
ccaatacccc tgctacaccc cccaacttcc ctgacgctct caccatgttc tcccgtctca
480
aggcctccga gagcttccac agcgggtggca gcggcagccc gatggccgcg acagccacgt
540
acccccgcc acacttcccc catgccgcca ccagcagctc tgccggcctcc agctggccca
600
cggcggcctc gcnccccggg gggcccacag caccaccagc cacagccgcc cctgtggact
660
ccaacacccc cttctccggc ttcagactgg ccaccctgc cccccaacag gccacctcag
720
acccagggc ccaccctgcc atggaggcag agagataagg gaggccctc cccctcccg
780
aggccagga ccccgtaggg cgggggagag gacgtctctg cgggccccct tnnacccct
840
ttctgtctg cacccttgtt tccccggagc cctggagggg agagcgcgga ctctagccag
900
caggggacac gtctggtgcc agaacacgca gctgcccaca cgcaagggtca tggccccagc
960
gccccggca catggagtgg ttcagagcgg cctgggtgcc tggcggacag aacttcagag
1020
ccacgcagc cttccttcga agacgcacct gccagccca gccagggggt gccgtggagg
1080
ccaccctgg cggagacatt gctgatecct ggcttggagc tccttggggg ccggcaggcc
1140

```

tcgacccccca ccctaggggaa tgcagagcct ctcgcgatgt gtgcgcgtgg ccgtgtctgt
 1200
 gtattttctac gtgtgtcgct cttcagaagc aacctagtgc ctgggggcagc tggactttgc
 1260
 atgttagtgt gagccccag cccctgccc gccgccccct cccagggcc ctgcctcctc
 1320
 cccacccccct cgtcagccag cgttgctgtt ccttgcagag aaaaggattg tgggaaacte
 1380
 caggactctt cccaccgcct cccagcgcct gcctgctggg gctgcctgca tgcctccctt
 1440
 gcacctgggg gtacccgcct ccacttcctt tccccctttt aacaaaagag aagaacgaat
 1500
 tccaaaccaa aaaaaaaaaa
 1519

<210> 3440

<211> 287

<212> PRT

<213> Homo sapiens

<400> 3440

Cys	Ala	Pro	Pro	Pro	Ile	Pro	Leu	Leu	His	Pro	Pro	Thr	Ser	Leu	Thr
1				5					10					15	
Leu	Ser	Pro	Cys	Ser	Pro	Val	Ser	Arg	Pro	Pro	Arg	Ala	Ser	Thr	Ala
			20					25					30		
Val	Ala	Ala	Ala	Ala	Arg	Trp	Pro	Arg	Gln	Pro	Arg	His	Pro	Arg	His
			35				40					45			
Thr	Ser	Pro	Met	Pro	Pro	Pro	Ala	Ala	Leu	Arg	Pro	Pro	Ala	Gly	Pro
			50				55				60				
Arg	Arg	Pro	Arg	Xaa	Pro	Gly	Gly	Pro	Gln	His	His	Gln	Pro	Gln	Pro
65					70				75					80	
Pro	Leu	Trp	Thr	Pro	Thr	Pro	Pro	Ser	Pro	Ala	Ser	Asp	Trp	Pro	Pro
				85				90					95		
Leu	Pro	Pro	Asn	Arg	Pro	Pro	Gln	Asn	Pro	Gly	Pro	Thr	Leu	Pro	Trp
			100				105					110			
Arg	Gln	Arg	Asp	Lys	Gly	Gly	Pro	Ser	Pro	Leu	Pro	Glu	Ala	Arg	Thr
			115				120					125			
Pro	Trp	Gly	Gly	Gly	Glu	Asp	Val	Ser	Ala	Gly	Pro	Leu	Xaa	Thr	Pro
			130			135					140				
Phe	Leu	Ser	Ala	Pro	Leu	Val	Pro	Arg	Ser	Pro	Gly	Gly	Glu	Ser	Ala
145					150					155				160	
Asp	Ser	Ser	Gln	Ala	Gly	Thr	Arg	Leu	Val	Pro	Glu	His	Ala	Ala	Ala
			165					170					175		
His	Thr	Gln	Gly	His	Gly	Pro	Ser	Gly	Pro	Gly	Thr	Trp	Ser	Gly	Ser
			180					185				190			
Glu	Arg	Pro	Gly	Cys	Leu	Ala	Asp	Arg	Thr	Ser	Glu	Thr	Thr	Gln	Pro
			195				200					205			
Ser	Phe	Glu	Asp	Ala	Pro	Ala	Gln	Pro	Ser	Pro	Gly	Val	Pro	Trp	Arg
			210			215					220				
Thr	Thr	Leu	Ala	Glu	Thr	Leu	Leu	Ile	Pro	Gly	Leu	Glu	Leu	Leu	Gly
225					230					235				240	
Gly	Arg	Gln	Ala	Ser	Thr	Pro	Thr	Leu	Gly	Asn	Ala	Glu	Pro	Leu	Arg
			245					250					255		
Met	Cys	Ala	Arg	Gly	Arg	Val	Cys	Val	Phe	Leu	Arg	Val	Ser	Leu	Phe

	260		265		270									
Arg	Ser	Asn	Leu	Val	Pro	Gly	Ala	Ala	Gly	Leu	Cys	Met	Leu	Val
	275						280					285		

<210> 3441

<211> 2074

<212> DNA

<213> Homo sapiens

<400> 3441

```

ntcatgaagc acctgcccaa ggttccggag aaaaaactga agctgggttat ggctgacaag
60
gagctgtatc gagcctgcgc cgtggaggtg aagcggcaga tctggcaaga caaccaggcc
120
ctcttcgggg acgaggtttc cccactcctg aagcagtaca tcctggagaa ggagagcgtc
180
ctcttcagta cagagctctc tgtcctgcac aactttttca gtccttcccc caagaccagg
240
cgccaggggc aggtggtgca gcggtgcacg cggatggtgg ggaagaacgt gaagctgtac
300
gacatggtgc tgcagtttct ggcacgctc ttcctgcgca cgcggaatgt gcactactgc
360
acgctgcggg ctgagctgct catgtccctg cagcactgg acgtgggtga aatctgcacc
420
gtggaccctg gccacaagtt cacctggtgc ctggacgcct gcatccgaga gcggttcgtg
480
gacagcaaga gggcgcgggg gctgcagggg tttctcgatg acgtcaagaa gggccaggag
540
caggtgctgg gggacctgtc catgatcctg tgtgacctt tcgccatcaa cagctggga
600
ctgagcacag tcaggcacct gcaggagctg gtcggccagg agacactgcc caggacagc
660
ccgacctcc tgctgctgct ccggtgctg gcgctggg ccaggagcctg ggacatgatc
720
gacagccagg tcttcaagga gccaagatg gaggtagagc tcataccag gttcctcccg
780
atgctcatgt ccttctcgtt ggatgactac actttcaatg tggatcagaa acttccggct
840
gaggagaaag cccagtcctc atatccaaac acacttccc aaagcttcac taagtttctg
900
caggagcagc gcatggcctg cgaggtgggg ctgtactacg tcctgcacat caccaagcag
960
aggaacaaga acgcgtcct ccgctgctg cccgggctgg tggagacctt tggcgacttg
1020
gcctttggcg acatcttct ccacctgctc acgggcaacc ttgcgctgct ggccgacgaa
1080
tttgcccttg aggacttctg cagcagcctc ttcgatggct tcttctcac cgctctcca
1140
aggaaggaga acgtgcaccg gcacgcgctg cggctcctca ttcacctgca cccagggtg
1200
gccccatcta agctggaggc gttgcagaag gccctggagc ctacaggcca gagcggagag
1260
gcagtgaagg agctttactc ccagctcggc gagaagctgg aacagctgga tcaccggaag
1320

```

cccagcccgg cacaggctgc ggagacgccg gccctggagc tgcccctccc cagcgtgccc
 1380
 gcccttgccc cgctctgagg gccctccaga cctgctcggg tgctggggcc atgccgagtc
 1440
 gcggccctgc tcagccggaa gaggctcccc gacctggatg tacagggcag tctctcttcc
 1500
 cggggctatg gctgggctg tctgcccgc atggccccct gcttctgct ccttgagct
 1560
 ggctcccga ccttgccac catccatgca gtggctccca gggcagagcc tctccttgta
 1620
 ctttggcagc catagaaagc gtgctcattt tctgttttcc tgtgttagga aaaaaccacc
 1680
 tgttttccaa ggggagaggg cggggcctga gggggggggc ggggctctt cattggccca
 1740
 gcttgccgaa agcgaggcac actgcttact gccttggggg tggtggagatg gaccctgac
 1800
 ctcgtggagg ccgtgtgggg gcagcagcct ggcctgtgcc atggtgggtg tcttggggcc
 1860
 tgtgaggagg gagccacctc accctgcagc ccagtttgca ggtgtggcct tgtttctcct
 1920
 tgcccagcag tgctgccttc agcgcccggtg acggggccag ctggacacac ggtgagattt
 1980
 tctcgtatgt aaataaaagg caatttggtg aacgtggaaa aaaaaaaaaa aaaaaaaaaa
 2040
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa
 2074

<210> 3442

<211> 374

<212> PRT

<213> Homo sapiens

<400> 3442

Met	Val	Gly	Lys	Asn	Val	Lys	Leu	Tyr	Asp	Met	Val	Leu	Gln	Phe	Leu
1				5					10					15	
Arg	Thr	Leu	Phe	Leu	Arg	Thr	Arg	Asn	Val	His	Tyr	Cys	Thr	Leu	Arg
		20						25					30		
Ala	Glu	Leu	Leu	Met	Ser	Leu	His	Asp	Leu	Asp	Val	Gly	Glu	Ile	Cys
		35					40					45			
Thr	Val	Asp	Pro	Cys	His	Lys	Phe	Thr	Trp	Cys	Leu	Asp	Ala	Cys	Ile
	50					55					60				
Arg	Glu	Arg	Phe	Val	Asp	Ser	Lys	Arg	Ala	Arg	Glu	Leu	Gln	Gly	Phe
65					70					75					80
Leu	Asp	Asp	Val	Lys	Lys	Gly	Gln	Glu	Gln	Val	Leu	Gly	Asp	Leu	Ser
				85					90					95	
Met	Ile	Leu	Cys	Asp	Pro	Phe	Ala	Ile	Asn	Thr	Leu	Ala	Leu	Ser	Thr
			100						105				110		
Val	Arg	His	Leu	Gln	Glu	Leu	Val	Gly	Gln	Glu	Thr	Leu	Pro	Arg	Asp
		115					120					125			
Ser	Pro	Asp	Leu	Leu	Leu	Leu	Leu	Arg	Leu	Leu	Ala	Leu	Gly	Gln	Gly
		130				135					140				
Ala	Trp	Asp	Met	Ile	Asp	Ser	Gln	Val	Phe	Lys	Glu	Pro	Lys	Met	Glu
145					150					155				160	
Val	Glu	Leu	Ile	Thr	Arg	Phe	Leu	Pro	Met	Leu	Met	Ser	Phe	Leu	Val

```

      165      170      175
Asp Asp Tyr Thr Phe Asn Val Asp Gln Lys Leu Pro Ala Glu Glu Lys
      180      185      190
Ala Pro Val Ser Tyr Pro Asn Thr Leu Pro Glu Ser Phe Thr Lys Phe
      195      200      205
Leu Gln Glu Gln Arg Met Ala Cys Glu Val Gly Leu Tyr Tyr Val Leu
      210      215      220
His Ile Thr Lys Gln Arg Asn Lys Asn Ala Leu Leu Arg Leu Leu Pro
      225      230      235      240
Gly Leu Val Glu Thr Phe Gly Asp Leu Ala Phe Gly Asp Ile Phe Leu
      245      250      255
His Leu Leu Thr Gly Asn Leu Ala Leu Leu Ala Asp Glu Phe Ala Leu
      260      265      270
Glu Asp Phe Cys Ser Ser Leu Phe Asp Gly Phe Phe Leu Thr Ala Ser
      275      280      285
Pro Arg Lys Glu Asn Val His Arg His Ala Leu Arg Leu Leu Ile His
      290      295      300
Leu His Pro Arg Val Ala Pro Ser Lys Leu Glu Ala Leu Gln Lys Ala
      305      310      315      320
Leu Glu Pro Thr Gly Gln Ser Gly Glu Ala Val Lys Glu Leu Tyr Ser
      325      330      335
Gln Leu Gly Glu Lys Leu Glu Gln Leu Asp His Arg Lys Pro Ser Pro
      340      345      350
Ala Gln Ala Ala Glu Thr Pro Ala Leu Glu Leu Pro Leu Pro Ser Val
      355      360      365
Pro Ala Pro Ala Pro Leu
      370

```

<210> 3443
 <211> 2070
 <212> DNA
 <213> Homo sapiens

```

<400> 3443
ctggccgtaa atgccgagga ggacgcctgg ttacgggcac aggtcatctc aacagaagag
60
aacaaaataa aggtatgcta tgttgactat ggttttagtg aaaatgttga aaaaagcaaa
120
gcatacaaat taaacccgaa gttttgttca ctctcatttc aagctacaaa atgtaagctt
180
gcaggcttgg aagtcctaag cgatgaccct gatctagtga aggtggttga atctttaact
240
tgtggaaaga tctttgcagt ggaaataactt gacaaagctg acattccact tgttgttctg
300
tacgatacct caggagaaga tgatatcaat atcaatgccca cctgcttgaa ggctatatgt
360
gacaagtcac tagaggttca cctgcagggtt gacgccatgt acacaaatgt caaaataact
420
aatatttgct ctgatgggac actctactgc cagggtgcctt gtaagggctc gaacaagctc
480
agtgaccttc tacgtaagat agaggactac ttccattgca agcacatgac ctctgagtgc
540
tttgtttcat tacccttctg tgggaaaatc tgcctcttcc attgcaaagg aaaatggtta
600

```

cgagtagaga tcacaaatgt tcacagcagc cgggctcttg atgttcagtt cctggactct
660
ggcactgtga catctgtaaa agtgtcagag ctccaggaaa ttccacctcg gtttctacaa
720
gaaatgattg caataccacc tcaggccatt aagtgtctgt tagcagatct tccacaatct
780
attggcatgt ggacaccaga tgcagtgtct tggttaagag attctgtttt gaattgtctg
840
gactgtagca ttaaggttac aaaagtggat gaaaccagag ggatcgcaca tgtttattta
900
tttacccta agaacttccc tgaccctcat cgcagtatta atcgccagat tacaaatgca
960
gacttgtgga agcatcagaa ggatgtgttt ttgagtcca tatccagtgg agctgactct
1020
cccaacagca aaaatggcaa catgcccatg tcgggcaaca ctggagagaa tttcagaaag
1080
aacctcacag atgtcatcaa aaagtccatg gtggaccata cgagcgcttt ctccacagag
1140
gaactgccac ctctgtcca cttatcaaag ccagggaac acatggatgt gtatgtgcct
1200
gtggcctgtc acccaggcta cttcgtcatc cagccttggc aggagataca taagttggaa
1260
gttctgatgg aagagatgat tctatattac agcgtgtctg aagagcgcca catagcagtg
1320
gagaaagacc aagtgtatgc tgcaaaagtg gaaaataagt ggcacagggt gcttttaaaa
1380
ggaatcctga ccaatggact ggtatctgtg tatgagctgg attatggcaa acacgaatta
1440
gtcaacataa gaaaagtaca gcccctagtg gacatgttcc gaaagctgcc cttccaagca
1500
gtcacagctc aacttgcagg agtgaagtgc aaccagtggc ctgaggagggc ttctatgggtg
1560
tttcgaaatc atgtggagaa gaaacctctg gtggcactgg tgcagacagt cattgaaaat
1620
gctaaccctt gggaccggaa agtagtggtc tacttagtgg acacatcggt gccagacacc
1680
gatacctgga ttcattgatt tatgtcagag tatctgatag agctttcaaa agttaattaa
1740
tgactgcctc tgaaaccttg acaactaatt cagatTTTTT agcaataaca aaatgtagta
1800
ggcttaaaaa aaatcttaac tctgtacat ggctctgact gctgtggggg attgaaaaga
1860
atatgcttat gtttgatgaa agatatttaa caagttttgt tttacagag ttgacttttc
1920
aaagaaaatt gtacttgaat tattactata atattagaat aaaaatgttt atcaatataa
1980
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
2040
aaaaaaaaaa aaaaaaaaaa aaaaaagggg
2070

<210> 3444

<211> 579

<212> PRT

<213> Homo sapiens

<400> 3444

```

Leu Ala Val Asn Ala Glu Glu Asp Ala Trp Leu Arg Ala Gln Val Ile
 1           5           10           15
Ser Thr Glu Glu Asn Lys Ile Lys Val Cys Tyr Val Asp Tyr Gly Phe
      20           25           30
Ser Glu Asn Val Glu Lys Ser Lys Ala Tyr Lys Leu Asn Pro Lys Phe
      35           40           45
Cys Ser Leu Ser Phe Gln Ala Thr Lys Cys Lys Leu Ala Gly Leu Glu
      50           55           60
Val Leu Ser Asp Asp Pro Asp Leu Val Lys Val Val Glu Ser Leu Thr
      65           70           75           80
Cys Gly Lys Ile Phe Ala Val Glu Ile Leu Asp Lys Ala Asp Ile Pro
      85           90           95
Leu Val Val Leu Tyr Asp Thr Ser Gly Glu Asp Asp Ile Asn Ile Asn
      100          105          110
Ala Thr Cys Leu Lys Ala Ile Cys Asp Lys Ser Leu Glu Val His Leu
      115          120          125
Gln Val Asp Ala Met Tyr Thr Asn Val Lys Ile Thr Asn Ile Cys Ser
      130          135          140
Asp Gly Thr Leu Tyr Cys Gln Val Pro Cys Lys Gly Leu Asn Lys Leu
      145          150          155          160
Ser Asp Leu Leu Arg Lys Ile Glu Asp Tyr Phe His Cys Lys His Met
      165          170          175
Thr Ser Glu Cys Phe Val Ser Leu Pro Phe Cys Gly Lys Ile Cys Leu
      180          185          190
Phe His Cys Lys Gly Lys Trp Leu Arg Val Glu Ile Thr Asn Val His
      195          200          205
Ser Ser Arg Ala Leu Asp Val Gln Phe Leu Asp Ser Gly Thr Val Thr
      210          215          220
Ser Val Lys Val Ser Glu Leu Arg Glu Ile Pro Pro Arg Phe Leu Gln
      225          230          235          240
Glu Met Ile Ala Ile Pro Pro Gln Ala Ile Lys Cys Cys Leu Ala Asp
      245          250          255
Leu Pro Gln Ser Ile Gly Met Trp Thr Pro Asp Ala Val Leu Trp Leu
      260          265          270
Arg Asp Ser Val Leu Asn Cys Ser Asp Cys Ser Ile Lys Val Thr Lys
      275          280          285
Val Asp Glu Thr Arg Gly Ile Ala His Val Tyr Leu Phe Thr Pro Lys
      290          295          300
Asn Phe Pro Asp Pro His Arg Ser Ile Asn Arg Gln Ile Thr Asn Ala
      305          310          315          320
Asp Leu Trp Lys His Gln Lys Asp Val Phe Leu Ser Ala Ile Ser Ser
      325          330          335
Gly Ala Asp Ser Pro Asn Ser Lys Asn Gly Asn Met Pro Met Ser Gly
      340          345          350
Asn Thr Gly Glu Asn Phe Arg Lys Asn Leu Thr Asp Val Ile Lys Lys
      355          360          365
Ser Met Val Asp His Thr Ser Ala Phe Ser Thr Glu Leu Pro Pro
      370          375          380
Pro Val His Leu Ser Lys Pro Gly Glu His Met Asp Val Tyr Val Pro
      385          390          395          400
Val Ala Cys His Pro Gly Tyr Phe Val Ile Gln Pro Trp Gln Glu Ile

```


405 410 415
 His Lys Leu Glu Val Leu Met Glu Glu Met Ile Leu Tyr Tyr Ser Val
 420 425 430
 Ser Glu Glu Arg His Ile Ala Val Glu Lys Asp Gln Val Tyr Ala Ala
 435 440 445
 Lys Val Glu Asn Lys Trp His Arg Val Leu Leu Lys Gly Ile Leu Thr
 450 455 460
 Asn Gly Leu Val Ser Val Tyr Glu Leu Asp Tyr Gly Lys His Glu Leu
 465 470 475 480
 Val Asn Ile Arg Lys Val Gln Pro Leu Val Asp Met Phe Arg Lys Leu
 485 490 495
 Pro Phe Gln Ala Val Thr Ala Gln Leu Ala Gly Val Lys Cys Asn Gln
 500 505 510
 Trp Ser Glu Glu Ala Ser Met Val Phe Arg Asn His Val Glu Lys Lys
 515 520 525
 Pro Leu Val Ala Leu Val Gln Thr Val Ile Glu Asn Ala Asn Pro Trp
 530 535 540
 Asp Arg Lys Val Val Val Tyr Leu Val Asp Thr Ser Leu Pro Asp Thr
 545 550 555 560
 Asp Thr Trp Ile His Asp Phe Met Ser Glu Tyr Leu Ile Glu Leu Ser
 565 570 575
 Lys Val Asn

<210> 3445

<211> 2086

<212> DNA

<213> Homo sapiens

<400> 3445

nnacgcgtgg cggcagaggg tatccaaggg cggacctggc gcgcaggcgc tgacccgacc
 60
 tggcagttag ctggccgcgg ccttggctga gaggccttaa ccccgccggg cggcgcgcgc
 120
 cctgcatgcg agttgggccc cgggcggggg tggagcctac tcggggcgac tgcgatggac
 180
 gccttagaag gagagagctt tgcgctgtct ttctcctccg cctctgatgc agaatttgat
 240
 gctgtggttg gatatttaga ggacattatc atggatgacg agttccagtt attacagaga
 300
 aatttcatgg acaagtacta cctggagttt gaagacacag aagagaataa actcatctac
 360
 acacctatct ttaatgaata catttctttg gtagaaaaat acattgaaga acagctgctg
 420
 cagcggattc ctgagttcaa catggcagcc ttcaccacaa cattacacca tctgttccgt
 480
 ttgaggcacc ataaggatga agtggctggg gacatattcg acatgctgct caccttcaca
 540
 gattttctgg cttttaaaga aatgtttttg gactacagag cagaaaaaga aggccgagga
 600
 ctggacttaa gcagtggctt agtgggtgact tcattgtgca aatcatcttc tctgccagct
 660
 tcccagaaca atctgcggca ctaggtccta cctccagcca atgaatggga tcattctgga
 720

tgtcaccagc ccaataggct cagctcatga tgacagaaca catcttggaa agactgactc
780
tgttatgtaa ctcttcattt atgttaagta ttaataggtc aaaacccaaa tgacctaac
840
ctcctggacc tatttatcct gaaacacctt cttgtattca ttaaccatag tactcctccc
900
cacctcaagt agacacctct ctcaggagct tctgagtcag acgcctctgg agcgagccct
960
atgtcaggca ctccacctgg ggggcccttc cccagcatac ctgctggtgt gtaagtgtgg
1020
actaaccgcg cgccaccacc ctctgttcca gcaggctctg catgaatctt tgtgcacttg
1080
cacctctttt tcacatgggc cacagtttca gtacttcagc ctcagtgggg ttcttgatgt
1140
ttatctaggg tgttactcaa gccagtttg agattttgga gtctcctgtg atcacatctt
1200
gtctcggctg taggaatcaa cagaaggaga cgtcctctac ataaaagctc catgtgaaaa
1260
gtactccta gtcttaacat ttgcagtcct tgtgtcactg tcttctgggc ctgatgtagt
1320
cccactgttt ctagaagtct cttttaagca ttatttttga aaaaaaaaaat atttttatag
1380
atgaatactc aggctaacct agtggatgtg atcttggaaac ttccatgatt atccacttaa
1440
agatcaaagt atttatatgt gtgtgctttt taggtgtttg ttagtactgt gaaggcaaaa
1500
atgctttcta cattgacatt cattcctatt ttactgggca cctatgaatg tatgctgtgt
1560
gctagaaata gactaaaaca tattcctata gcatgttagt gtgtttgcat gtttgctgaa
1620
aatcctttgt gtataaacca gtttgtaagg ttctctgggt taggtaggga ctctgcagtt
1680
tcttctgtgc aaaatctctc ctaccaagat ggtgttccac tgtccagccc agcatgagta
1740
gcaggtagag cacagcttta ctggctgttt gtatgctttg gtttagtgca atgtgtggta
1800
gattacttat cagaaaacat atatgtcatc tctagaacga agaaaaagca tagtagttca
1860
attcccagtg tgtccctttg attttttttt tttaatagta aaaataagaa tctgtactga
1920
cttttcactt ggccattctg gttttaaagg acaagctaca agctctgtgt ttctgtactg
1980
atgtgtcact tattaaatac ttttgtacca tgagtaaaac ttcaggtgtt tcgcaagaac
2040
caccattctc aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa
2086

<210> 3446

<211> 169

<212> PRT

<213> Homo sapiens

<400> 3446

Met Asp Ala Leu Glu Gly Glu Ser Phe Ala Leu Ser Phe Ser Ser Ala

```

      1             5             10             15
Ser Asp Ala Glu Phe Asp Ala Val Val Gly Tyr Leu Glu Asp Ile Ile
      20             25             30
Met Asp Asp Glu Phe Gln Leu Leu Gln Arg Asn Phe Met Asp Lys Tyr
      35             40             45
Tyr Leu Glu Phe Glu Asp Thr Glu Glu Asn Lys Leu Ile Tyr Thr Pro
      50             55             60
Ile Phe Asn Glu Tyr Ile Ser Leu Val Glu Lys Tyr Ile Glu Glu Gln
      65             70             75             80
Leu Leu Gln Arg Ile Pro Glu Phe Asn Met Ala Ala Phe Thr Thr Thr
      85             90             95
Leu His His Leu Phe Arg Leu Arg His His Lys Asp Glu Val Ala Gly
      100            105            110
Asp Ile Phe Asp Met Leu Leu Thr Phe Thr Asp Phe Leu Ala Phe Lys
      115            120            125
Glu Met Phe Leu Asp Tyr Arg Ala Glu Lys Glu Gly Arg Gly Leu Asp
      130            135            140
Leu Ser Ser Gly Leu Val Val Thr Ser Leu Cys Lys Ser Ser Ser Leu
      145            150            155            160
Pro Ala Ser Gln Asn Asn Leu Arg His
      165

```

<210> 3447

<211> 936

<212> DNA

<213> Homo sapiens

<400> 3447

```

acgcgtgaag ggtttgcggg gaagatggag tatcccgcg cggccacggg gcaggccgcg
60
gacggcggag cggccggggc ttacagcagc tcggagttgc tggagggcca ggagccggac
120
ggggtgcgct ttgaccgcga gagggcgcg cgctgtggg aagccgtgtc cggtgcccag
180
ccggtgggta gagaggaagt ggagcacatg atccagaaga accaatgtct cttcaccaac
240
accagtgtg aggtttgctg cgccttgctt atttctgagt cccagaagct ggcacattac
300
cagagcaaaa aacatgccaa caaagtgaag agatacctag caatccatgg aatggagaca
360
ttaaaggggg aaacgaagaa gctagactca gatcagaaga gcagcagaag caaagacaag
420
aaccagtgtc gccccatctg taacatgacc ttttcctccc ctgtcgtggc ccagtgcac
480
tacctgggga agaccacgc aaagaactta aagctgaagc agcagtccac taaggtggaa
540
gccttgacc agaatagaga gatgatagac ccagacaagt tctgcagcct ctgccatgca
600
actttcaacg accctgtcat ggctcaacaa cattatgtgg gcaagaaaca cagaaaacag
660
gagaccaagc tcaaactaat ggcacgctat gggcggctgg cggaccctgc tgtcactgac
720
tttccagctg gaaagggcta cccctgcaaa acatgtaaga tagtgctgaa ctccatagaa
780

```

cagtaccaag ctcatgtcag cggcttcaaa cacaagaacc agtcaccaaa aacagtggca
840
tcatccctgg gccagattcc aatgcaaagg caacccattc agaaagactc aaccaccttg
900
gaagactaga ggtgattctg cccagcatcc catatt
936

<210> 3448

<211> 302

<212> PRT

<213> Homo sapiens

<400> 3448

Thr	Arg	Glu	Gly	Phe	Ala	Gly	Lys	Met	Glu	Tyr	Pro	Ala	Pro	Ala	Thr
1				5					10					15	
Val	Gln	Ala	Ala	Asp	Gly	Gly	Ala	Ala	Gly	Pro	Tyr	Ser	Ser	Ser	Glu
			20					25					30		
Leu	Leu	Glu	Gly	Gln	Glu	Pro	Asp	Gly	Val	Arg	Phe	Asp	Arg	Glu	Arg
		35					40					45			
Ala	Arg	Arg	Leu	Trp	Glu	Ala	Val	Ser	Gly	Ala	Gln	Pro	Val	Gly	Arg
	50					55					60				
Glu	Glu	Val	Glu	His	Met	Ile	Gln	Lys	Asn	Gln	Cys	Leu	Phe	Thr	Asn
65					70					75					80
Thr	Gln	Cys	Lys	Val	Cys	Cys	Ala	Leu	Leu	Ile	Ser	Glu	Ser	Gln	Lys
				85					90					95	
Leu	Ala	His	Tyr	Gln	Ser	Lys	Lys	His	Ala	Asn	Lys	Val	Lys	Arg	Tyr
			100					105					110		
Leu	Ala	Ile	His	Gly	Met	Glu	Thr	Leu	Lys	Gly	Glu	Thr	Lys	Lys	Leu
		115					120					125			
Asp	Ser	Asp	Gln	Lys	Ser	Ser	Arg	Ser	Lys	Asp	Lys	Asn	Gln	Cys	Cys
	130					135					140				
Pro	Ile	Cys	Asn	Met	Thr	Phe	Ser	Ser	Pro	Val	Val	Ala	Gln	Ser	His
145					150					155					160
Tyr	Leu	Gly	Lys	Thr	His	Ala	Lys	Asn	Leu	Lys	Leu	Lys	Gln	Gln	Ser
				165					170					175	
Thr	Lys	Val	Glu	Ala	Leu	His	Gln	Asn	Arg	Glu	Met	Ile	Asp	Pro	Asp
		180						185					190		
Lys	Phe	Cys	Ser	Leu	Cys	His	Ala	Thr	Phe	Asn	Asp	Pro	Val	Met	Ala
		195					200					205			
Gln	Gln	His	Tyr	Val	Gly	Lys	Lys	His	Arg	Lys	Gln	Glu	Thr	Lys	Leu
	210					215					220				
Lys	Leu	Met	Ala	Arg	Tyr	Gly	Arg	Leu	Ala	Asp	Pro	Ala	Val	Thr	Asp
225				230						235					240
Phe	Pro	Ala	Gly	Lys	Gly	Tyr	Pro	Cys	Lys	Thr	Cys	Lys	Ile	Val	Leu
				245					250					255	
Asn	Ser	Ile	Glu	Gln	Tyr	Gln	Ala	His	Val	Ser	Gly	Phe	Lys	His	Lys
			260				265						270		
Asn	Gln	Ser	Pro	Lys	Thr	Val	Ala	Ser	Ser	Leu	Gly	Gln	Ile	Pro	Met
	275						280					285			
Gln	Arg	Gln	Pro	Ile	Gln	Lys	Asp	Ser	Thr	Thr	Leu	Glu	Asp		
	290					295						300			

<210> 3449

<211> 877

<212> DNA

<213> Homo sapiens

<400> 3449

```

ntgatcttca gcaaccatca ccaccggcta cagctgaagg cagctccggc ctctccaat
60
ccccccggcg ccccggtctt gccgctgcac aattcctccg tgactgccaa ctcccagttcc
120
ccggcccttc tggccggcac caaccccggt gctgtcgtcg cggatggagg cagttgcccc
180
gcacactacc cgggtgcacga gtgcgtcttc aaggggggatg tgaggagact ctctctctc
240
atccgcacgc acaatatcgg gcagaaagat aatcacggaa atactccttt acaccttgct
300
gtgatgttag gaaataaaga atgtgccccat ttacttttgg ctcaaatgc tccagtcaag
360
gtgaaaaatg ctccgggatg gagccctctg gcggaagcca tcagctatgg agataggcag
420
atgattacag ctcttttgag gaagcttaag cagcaatcca gggaaagtgt tgaagaaaaa
480
cgacctgat tattaaaagc cctgaaagag ctaggtgact tttatctaga acttcactgg
540
gattttcaaa gctgggtgcc ttacttttcc cgaattctgc cttccgatgc atgtaaaata
600
tacaacaag gtatcaatat caggcttgac acaactctca tagactttac tgacatgaag
660
tgccaacgag gggatctaag cttcattttc aatgggggatg cggcgccctc tgaatctttt
720
gtagtattag acaatgaaca aaaagtttat cagcgaatac atcatgaggc tcacatccca
780
ggaatcagag atggaaacag aagaagaggt ggatatttta atgagcagtg atatttactc
840
tgcaacttta tcaacaaaat caatttcttt cacgcgt
877

```

<210> 3450

<211> 276

<212> PRT

<213> Homo sapiens

<400> 3450

```

Xaa Ile Phe Ser Asn His His His Arg Leu Gln Leu Lys Ala Ala Pro
 1           5           10           15
Ala Ser Ser Asn Pro Pro Gly Ala Pro Ala Leu Pro Leu His Asn Ser
          20           25           30
Ser Val Thr Ala Asn Ser Gln Ser Pro Ala Leu Leu Ala Gly Thr Asn
          35           40           45
Pro Val Ala Val Val Ala Asp Gly Gly Ser Cys Pro Ala His Tyr Pro
          50           55           60
Val His Glu Cys Val Phe Lys Gly Asp Val Arg Arg Leu Ser Ser Leu
65           70           75           80
Ile Arg Thr His Asn Ile Gly Gln Lys Asp Asn His Gly Asn Thr Pro
          85           90           95
Leu His Leu Ala Val Met Leu Gly Asn Lys Glu Cys Ala His Leu Leu

```

	100		105		110										
Leu	Ala	His	Asn	Ala	Pro	Val	Lys	Val	Lys	Asn	Ala	Gln	Gly	Trp	Ser
	115						120					125			
Pro	Leu	Ala	Glu	Ala	Ile	Ser	Tyr	Gly	Asp	Arg	Gln	Met	Ile	Thr	Ala
	130						135					140			
Leu	Leu	Arg	Lys	Leu	Lys	Gln	Gln	Ser	Arg	Glu	Ser	Val	Glu	Glu	Lys
145					150					155					160
Arg	Pro	Arg	Leu	Leu	Lys	Ala	Leu	Lys	Glu	Leu	Gly	Asp	Phe	Tyr	Leu
			165						170					175	
Glu	Leu	His	Trp	Asp	Phe	Gln	Ser	Trp	Val	Pro	Leu	Leu	Ser	Arg	Ile
		180						185					190		
Leu	Pro	Ser	Asp	Ala	Cys	Lys	Ile	Tyr	Lys	Gln	Gly	Ile	Asn	Ile	Arg
	195						200					205			
Leu	Asp	Thr	Thr	Leu	Ile	Asp	Phe	Thr	Asp	Met	Lys	Cys	Gln	Arg	Gly
	210					215					220				
Asp	Leu	Ser	Phe	Ile	Phe	Asn	Gly	Asp	Ala	Ala	Pro	Ser	Glu	Ser	Phe
225					230					235					240
Val	Val	Leu	Asp	Asn	Glu	Gln	Lys	Val	Tyr	Gln	Arg	Ile	His	His	Glu
			245						250					255	
Ala	His	Ile	Pro	Gly	Ile	Arg	Asp	Gly	Asn	Arg	Arg	Arg	Gly	Gly	Tyr
		260						265						270	
Phe	Asn	Glu	Gln												
	275														

<210> 3451

<211> 595

<212> DNA

<213> Homo sapiens

<400> 3451

```

gcattttttac agtttgtata tcccatttttc aaggcttcag tggggctgct tagacaaaaa
60
cgatcttcag ggtttacaga atgggtcctc ctaaagctct ctgagccccg gccgtaggta
120
gaaatattca gtaagtagtg ccctgccatt gcagggttgg atgtccttct gccagcaaaa
180
cccagcatga acctctggct tgtggagatg tcttccagct ggaaacctga gtgagcgaag
240
ttgaactgtg agggcggcac aactgagaga agattctgcc tccgaacct ctgaatgaga
300
gtctgaagga tctgatcttg ggttgcttta cttagtcctt cgtggtattg gtgtgtgtca
360
atgctggagt ccctcagctc cttagctgaa aagagctgaa ggggccttgg aacctggggg
420
agctgcttac tttgcaagg tttgccagc tgctgctgcg tagctggatg ggactgtctc
480
tcattaactt cctctctggt gctattttct gttgtgttgg tagctatgag cgctcccatc
540
cccccttcct cttttgcagg caggggaacc gcttccattt caactttggg gagag
595

```

<210> 3452

<211> 192

<212> PRT

<213> Homo sapiens

<400> 3452

```

Met Glu Ala Val Pro Leu Pro Ala Lys Glu Glu Arg Gly Met Gly Ala
 1           5           10           15
Leu Ile Ala Thr Asn Thr Thr Glu Asn Ser Thr Arg Glu Glu Val Asn
 20           25           30
Glu Arg Gln Ser His Pro Ala Thr Gln Gln Gln Leu Gly Lys Thr Leu
 35           40           45
Gln Ser Lys Gln Leu Pro Gln Val Pro Arg Pro Leu Gln Leu Phe Ser
 50           55           60
Ala Lys Glu Leu Arg Asp Ser Ser Ile Asp Thr His Gln Tyr His Glu
 65           70           75           80
Gly Leu Ser Lys Ala Thr Gln Asp Gln Ile Leu Gln Thr Leu Ile Gln
 85           90           95
Arg Val Arg Arg Gln Asn Leu Leu Ser Val Val Pro Pro Ser Gln Phe
100           105           110
Asn Phe Ala His Ser Gly Phe Gln Leu Glu Asp Ile Ser Thr Ser Gln
115           120           125
Arg Phe Met Leu Gly Phe Ala Gly Arg Arg Thr Ser Lys Pro Ala Met
130           135           140
Ala Gly His Tyr Leu Leu Asn Ile Ser Thr Tyr Gly Arg Gly Ser Glu
145           150           155           160
Ser Phe Arg Arg Thr His Ser Val Asn Pro Glu Asp Arg Phe Cys Leu
165           170           175
Ser Ser Pro Thr Glu Ala Leu Lys Met Gly Tyr Thr Asn Cys Lys Asn
180           185           190

```

<210> 3453

<211> 477

<212> DNA

<213> Homo sapiens

<400> 3453

```

nnacgcgtga aggggtcccg cgcgggggct ggcgggctga ggggagaaaa gatggcgggcg
60
gcggcggcag ctggtgcggc ctccgggctg ccgggtccag tggcacaagg attaaaggaa
120
gcgttagtggt atacgctcac cgggataccta tccccagtac aggaggtgcg ggcggctgct
180
gaagaacaga ttaaggtgct ggaggtgacg gaggaatttg gtgttcactt ggcagaactg
240
actgtagatc cccagggggc actggcaatc cgtcagctgg catcagtcac cttgaaacaa
300
tatgtggaga ctactgggtg tgcccaatca gagaaattta ggctcctga aactacagaa
360
agggcaaaaa ttgttatccg ggagctattg cctaattgggt tgagagaatc gataagcaaa
420
gtgcgctcca gtgtggccta tgcagtgatc gccattgcc actgggactg gcctgaa
477

```

<210> 3454

<211> 159

<212> PRT

<213> Homo sapiens

<400> 3454

Xaa Arg Val Lys Gly Pro Gly Arg Gly Ala Gly Gly Leu Arg Gly Glu
 1 5 10 15
 Lys Met Ala Ala Ala Ala Ala Gly Ala Ala Ser Gly Leu Pro Gly
 20 25 30
 Pro Val Ala Gln Gly Leu Lys Glu Ala Leu Val Asp Thr Leu Thr Gly
 35 40 45
 Ile Leu Ser Pro Val Gln Glu Val Arg Ala Ala Ala Glu Glu Gln Ile
 50 55 60
 Lys Val Leu Glu Val Thr Glu Glu Phe Gly Val His Leu Ala Glu Leu
 65 70 75 80
 Thr Val Asp Pro Gln Gly Ala Leu Ala Ile Arg Gln Leu Ala Ser Val
 85 90 95
 Ile Leu Lys Gln Tyr Val Glu Thr His Trp Cys Ala Gln Ser Glu Lys
 100 105 110
 Phe Arg Pro Pro Glu Thr Thr Glu Arg Ala Lys Ile Val Ile Arg Glu
 115 120 125
 Leu Leu Pro Asn Gly Leu Arg Glu Ser Ile Ser Lys Val Arg Ser Ser
 130 135 140
 Val Ala Tyr Ala Val Ser Ala Ile Ala His Trp Asp Trp Pro Glu
 145 150 155

<210> 3455

<211> 4886

<212> DNA

<213> Homo sapiens

<400> 3455

nncttcggca caggattgat ccagtcctcc ttccttcact accacatgaa tgctgggcag
 60
 cccaggatca cactcactgc accctcaact cagaccgtta cctggcacac tggcctcact
 120
 cttgtcggag actgagctat tggcagtgcc ttcagctctg agctcaggca cctcgaacat
 180
 tgttttttgtc gttaaggatc ctaaagtgtc gtggggagtg atcacatttt tctcaacatc
 240
 cctggcccca cctcttctgc cacaacgtc agcatggtgg tatcagccgg ccctttgtcc
 300
 agcgagaagg cagagatgaa cattctagaa atcaatgaga aattgcgccc ccagttggca
 360
 gagaagaaac agcagttcag aaacctcaaa gagaaatggt ttctaactca actggccggc
 420
 ttcttgcca accgacagaa gaaatacaaa tatgaagagt gtaaagatct cataaaattt
 480
 atgctgagga atgagcgaca gttcaaggag gagaagcttg cagagcagct caagcaagct
 540
 gaggagctca ggcaatataa agtcctggtt cacgctcagg aacgagagct gacccagtta
 600
 agggagaagt tacgggaagg gagagatgcc tcccgctcat tgaatgagca tctccaggcc
 660
 ctcttcactc cggatgagcc ggacaagtcc caggggcagg acctccaaga acagctggct
 720

gaggggtgta ggctggcaca gcacctcgtc caaaagctca gcccagaaaa tgacaacgat
780
gacgatgaag atgttcaagt tgaggtggct gagaaagtgc agaaatcgtc tgccccagg
840
gagatgcaga aggctgaaga aaaggaagtc cctgaggact cactggagga atgtgccatc
900
acttgttcaa atagccatgg cccttatgac tccaaccagc cacataagaa aacccaaatc
960
acatttgagg aagacaaaagt cgactcaact ctcatgggt catcctctca tgttgaatgg
1020
gaggatgctg tacacattat tccagaaaaat gaaagtgatg atgaggaaga ggaagaaaaa
1080
gggccagtgt ctcccaggaa tctgcaggag tctgaagagg aggaagtccc ccaggagtcc
1140
tgggatgaag gttattcgac tctctcaatt cctcctgaaa tgttggcctc gtacaagtct
1200
tacagcagca catttcactc attagaggaa cagcaagtct gcatgggtgt tgacataggc
1260
agacatcggg gggatcaagt gaaaaaggag gaccacgagg caacagggtcc caggctcagc
1320
agagagctgc tggatgagaa agggcctgaa gtcttgcagg actcactgga tagatgttat
1380
tcaactcctt caggttgtct tgaactgact gactcatgcc agccctacag aagtgccttt
1440
tacgtattgg agcaacagcg tgttggcttg gctgttgaca tggatgaaat tgaaaagtac
1500
caagaagtgg aagaagacca agaccatca tgccccaggc tcagcaggga gctgctggat
1560
gagaaagagc ctgaagtctt gcaggactca ctggatagat gttattcgac tccttcagg
1620
tatcttgaac tgcctgactt aggccagccc tacagcagtg ctgtttactc attggaggaa
1680
cagtaccttg gcttggctct tgacgtggac agaattaaaa aggaccaaga agaggaagaa
1740
gaccaaggcc caccatgccc caggctcagc agggagctgc tggaggtagt agagcctgaa
1800
gtcttgcagg actcactgga tagatgttat tcaactcctt ccagttgtct tgaacagcct
1860
gactcctgcc agccctatgg aagttccttt tatgcattgg aggaaaagca tgttggcttt
1920
tctcttgacg tgggagaaat tgaaaagaag ggggaagggga agaaaagaag ggggaagaaga
1980
tcaaagaagg aaagaagaag ggggaagaaa gaaggggaag aagatcaaaa cccaccatgc
2040
cccaggctca gcaggagct gctggatgag aaagggcctg aagtcttgca ggactcactg
2100
gatagatgtt attcaactcc ttcaggttgt cttgaactga ctgactcatg ccagccctac
2160
agaagtgcct ttacatatt ggagcaacag tgtgttggct tggctgttga catggatgaa
2220
attgaaaagt accaagaagt ggaagaagac caagacccat catgccccag gctcagcggg
2280
gagctgttgg atgagaaaga gcctgaagtc ttgcaggagt cactggatag atgctattca
2340

actccttcag gttgtcttga actgactgac tcatgccagc cctacagaag tgccttttac
2400
atattggagc aacagcgtgt tggcttggct gttgacatgg atgaaattga aaagtaccaa
2460
gaagtgggaag aagaccaaga cccatcatgc cccaggetca gcagggagct gctggatgag
2520
aaagagcctg aagtcttgca ggactcactg gatagatggt attcgactcc ttcaggttat
2580
cttgaactgc ctgacttagg ccagccctac agcagtgtctg tttactcatt ggaggaacag
2640
taccttggct tggctcttga cgtggacaga attaaaaagg accaagaaga ggaagaagac
2700
caaggcccac catgccccag gctcagcagg gagctgctgg aggtagtaga gcctgaagtc
2760
ttgcaggact cactggatag atgttattca actccttcca gttgtcttga acagcctgac
2820
tcctgccagc cctatggaag ttccttttat gcattggagg aaaaacatgt tggcttttct
2880
cttgacgtgg gagaaattga aaagaagggg aaggggaaga aaagaagggg aagaagatca
2940
aagaagcaaa gaagaagggg aagaaaagaa ggggaagaag atcaaaaccc accatgcccc
3000
aggctcaacg gtgtgctgat ggaagtggaa gagcctgaag tcttacagga ctactggat
3060
agatgttatt cgactccgtc aatgtacttt gaactacctg actcattcca gcactacaga
3120
agtgtgtttt actcatttga ggaagagcac atcagcttcg ccctttacgt ggacaatagg
3180
ttttttactt tgacggtgac aagtctccac ctggtgttcc agatgggagt catattccca
3240
caataagcag cccttactaa tccgagagat gtcattcctg caggcaggac ctataggcaa
3300
gtgaagattt gaatgaaagt acagttccat ttggaagccc agacatagga tgggtcagtg
3360
ggcatggctc tattcctatt ctcaaaccat gccagtggca acctgtgctc agtctgaaga
3420
caatggaccc aagttagggtg tgacacgttc acataactgt gcagcacatg ccgggagtga
3480
tcagtcggac attttaattt gaaccacgta tctctgggta gctacaaaat tcctcaggga
3540
tttcattttg caggcatgtc tctgagcttc tatacctgct caaggtcatt gtcattttg
3600
tgtttagctc atccaaaggt gttaccctgg tttcaatgaa cctaacctca ttctttgtat
3660
cttcagtgtt gaattgtttt agctgatcca tctgtaacac aggagggatc cttggctgag
3720
gattgtattt cagaaccacc aactgctctt gacaattgtt aaccactag gtccttttg
3780
ttagagaagc cacagtcctt cagcctccaa ttggtgtcag tacttaggaa gaccacagct
3840
agatggacaa acagcattgg gaggccttag ccctgctcct ctcaattcca tcctgtagag
3900
aacaggagtc aggagccgct ggcaggagac agcatgtcac ccaggactct gccggtgcag
3960

aatatgaaca atgccatggt cttgcagaaa acgcttagcc tgagtttcat aggaggtaat
 4020
 caccagacaa ctgcagaatg tggaacactg agcaggacaa ctgacctgtc tccttcacat
 4080
 agtccatata accacaaatc acacaacaaa aaggagaaga gatatttttg gttcaaaaaa
 4140
 agtaaaaaga taatgtagct gcattttctt agttattttg ggccccaat atttcctcat
 4200
 ctttttggtg ttgtcattga tgggtggtgac atggacttgt ttatagagga caggtcagct
 4260
 gtctggctca atgatctaca ttctgaagtt gtctgaaaat gtcttcattga tttaattcag
 4320
 cctaaacggt ttgccgggaa cactgcagag acaatgctgt gagtttccaa cctcagccca
 4380
 tctgctggca gagaaggtct agtttgcctc tcaccattat catgatata ggactgggta
 4440
 cttgggtaag gaggggtcta ggagatctgt cccttttaga gacaccttac ttataatgaa
 4500
 gaagtacttg ggaaagtggg tttcaagagt ataaatatcc tgtattctaa tgatcatcct
 4560
 ctaaacattt tatcatttat taatcctccc tgctgtgtc tattattata ttcatatctc
 4620
 tacactgcaa aatttggggg ctcaattttt actgtgcctt tgtttttact agtgtctgtc
 4680
 gttgcaaaaa gaagaaaaca ttctctgcct gagttttaat tttgtccaa agttaatttt
 4740
 aatctataca attaaaagct tttgcctatc actctggact tttggattgt tttttacatt
 4800
 cagtgttata atattttggt atgctgattg gtttgggtgg gtactgatgt gaattaataa
 4860
 aaacatttca tttccaaaaa aaaaaa
 4886

<210> 3456

<211> 117

<212> PRT

<213> Homo sapiens

<400> 3456

Glu	Ile	Glu	Lys	Lys	Gly	Lys	Gly	Lys	Lys	Arg	Arg	Gly	Arg	Arg	Ser
1				5					10					15	
Lys	Lys	Gln	Arg	Arg	Arg	Gly	Arg	Lys	Glu	Gly	Glu	Glu	Asp	Gln	Asn
			20					25					30		
Pro	Pro	Cys	Pro	Arg	Leu	Asn	Gly	Val	Leu	Met	Glu	Val	Glu	Glu	Pro
		35					40					45			
Glu	Val	Leu	Gln	Asp	Ser	Leu	Asp	Arg	Cys	Tyr	Ser	Thr	Pro	Ser	Met
	50					55					60				
Tyr	Phe	Glu	Leu	Pro	Asp	Ser	Phe	Gln	His	Tyr	Arg	Ser	Val	Phe	Tyr
65					70					75				80	
Ser	Phe	Glu	Glu	Glu	His	Ile	Ser	Phe	Ala	Leu	Tyr	Val	Asp	Asn	Arg
				85					90					95	
Phe	Phe	Thr	Leu	Thr	Val	Thr	Ser	Leu	His	Leu	Val	Phe	Gln	Met	Gly
			100					105					110		
Val	Ile	Phe	Pro	Gln											

115

<210> 3457
<211> 646
<212> DNA
<213> Homo sapiens

<400> 3457
acgcgtgact ttgtatccat gtccagggtgt ccatgcgcct gtgtgtgcag atgtgtcnct
60
gtccctgggt gtgtctgtgc ctgtgtgtgc gttgatatct gtgcctgcct cttcacacat
120
aggtgggaat gcagagtgtg tattctttgt nnatgcacct gtacacagge tngggcgggc
180
aagtgaggat gcgtatgttn gggtggctgt gtctgtatct gcatttgcac gngtgtattg
240
gagattggag ctgtgtgtct gtgcgtgtgt gtagtgtgta ccgtgtgcac atgtatgtgt
300
gtgcctgtgg accagcacct gtgttgccac atttgggtga cggtagatcc atgcactnng
360
gtctgcaggt gtatttgcga gtgcgtgtgt ctgtctaaca cactctgtag atgtcgccgc
420
ctgaatgaga gccagagcag agctctcccc agcccttccc aagtactgtt cccctctacc
480
gacgactccc cagttctctc ctccctgat gcaatgcacg cctagtgggc tacgtgtgcc
540
aaccctccag gccttctcct gccacaggct ctgtctctgt cccgtcgctg tgcctctg
600
ccctgctaac ccagccctcc gtgccctgga tgcgcccgga catggc
646

<210> 3458
<211> 61
<212> PRT
<213> Homo sapiens

<400> 3458
Thr Arg Asp Phe Val Ser Met Ser Arg Cys Pro Cys Ala Cys Val Cys
1 5 10 15
Arg Cys Val Xaa Val Pro Gly Cys Val Cys Ala Cys Val Cys Val Asp
20 25 30
Ile Cys Ala Cys Leu Phe Thr His Arg Trp Glu Cys Arg Val Cys Ile
35 40 45
Leu Cys Xaa Cys Thr Cys Thr Gln Ala Xaa Ala Gly Lys
50 55 60

<210> 3459
<211> 592
<212> DNA
<213> Homo sapiens

<400> 3459
acgcgtcctg ggctgggtga ccctagcggt ctagatatag cctcttatct tggcaccag
60

gggcatactg gggccccctct tttcctgagc tggggagcaa ggtgccagga ggtggctggg
 120
 gaccctactt cactgcaggg ggctcagccc agtctgcctc aggcagaaca agggctctggg
 180
 ggtggctgtg gggggctgtg gatgggtccc agtgggcctg ctgccactcc caccacatgg
 240
 gacctgcctt ccggccctgc caggattcca gtcctgcctt gtcacccca gcttccaggc
 300
 ccttccctgt gtgcagcctc agtttgctg ctgcagaata agcaccacgc tccctcgtgg
 360
 gcagaggcac cggcagactc accacgcgcc ctgcaggcat gtcctgtgct gtgccaggca
 420
 ggccccggcc acgtccctgc ccccgagct ggccttcagc ggggacagtg gtcagcactg
 480
 aagacagtca tacctgcccc gccggcactg cctgtctcag cacggggaca atttgaactt
 540
 aagctttaac ttaattaaaa tgaactaaaa ttaaaaaaaaa aaaaaaaaaa aa
 592

<210> 3460

<211> 115

<212> PRT

<213> Homo sapiens

<400> 3460

Met	Gly	Pro	Ser	Gly	Pro	Ala	Ala	Thr	Pro	Thr	Thr	Trp	Asp	Leu	Pro
1				5					10					15	
Ser	Gly	Pro	Ala	Arg	Ile	Pro	Val	Leu	Pro	Cys	Ser	Pro	Gln	Leu	Pro
			20					25					30		
Gly	Pro	Ser	Leu	Cys	Ala	Ala	Ser	Val	Cys	Leu	Leu	Gln	Asn	Lys	His
		35					40					45			
His	Ala	Pro	Ser	Trp	Ala	Glu	Ala	Pro	Ala	Asp	Ser	Pro	Arg	Ala	Leu
	50					55				60					
Gln	Ala	Cys	Pro	Val	Leu	Cys	Gln	Ala	Gly	Pro	Gly	His	Val	Pro	Ala
65					70				75					80	
Pro	Gly	Ala	Gly	Leu	Gln	Arg	Gly	Gln	Trp	Ser	Ala	Leu	Lys	Thr	Val
			85					90					95		
Ile	Pro	Ala	Arg	Pro	Ala	Leu	Pro	Cys	Ser	Ala	Arg	Gly	Gln	Phe	Glu
			100					105					110		
Leu	Lys	Leu													
			115												

<210> 3461

<211> 474

<212> DNA

<213> Homo sapiens

<400> 3461

ttgctgttcc aggccttagt gtccgttttt gtggtgcagc tgcagctcca cgtcggctac
 60
 ttcgtgctgg gtcgcatect ttgtgccttc ctcggcgact tcgggggcct tctggctgct
 120
 agctttgcgt ccgtggcaga tgtcagctcc agtcgcagcc gcaccttcg gatggcctg
 180

ctggaagcca gcatcggggt ggctgggatg ctggcaagcc tcctcggggg cactggctc
 240
 cgggcccagg gttatgcaa ccccttctgg ctggccttgg ccttgctgat agccatgact
 300
 ctctatgcag ctttctgctt tggtagagacc ttaaaggagc caaagtccac ccggctcttc
 360
 acgttccgtc accaccgatc cattgtccag ctctatgtgg ctcccgcgcc agagaagtcc
 420
 aggaacatt tagccctcta ctactggcc atcttcgtgg tgatcactgt gcac
 474

<210> 3462

<211> 101

<212> PRT

<213> Homo sapiens

<400> 3462

Met	Ala	Leu	Leu	Glu	Ala	Ser	Ile	Gly	Val	Ala	Gly	Met	Leu	Ala	Ser
1				5				10					15		
Leu	Leu	Gly	Gly	His	Trp	Leu	Arg	Ala	Gln	Gly	Tyr	Ala	Asn	Pro	Phe
		20						25				30			
Trp	Leu	Ala	Leu	Ala	Leu	Leu	Ile	Ala	Met	Thr	Leu	Tyr	Ala	Ala	Phe
		35					40					45			
Cys	Phe	Gly	Glu	Thr	Leu	Lys	Glu	Pro	Lys	Ser	Thr	Arg	Leu	Phe	Thr
	50					55					60				
Phe	Arg	His	His	Arg	Ser	Ile	Val	Gln	Leu	Tyr	Val	Ala	Pro	Ala	Pro
65					70					75				80	
Glu	Lys	Ser	Arg	Lys	His	Leu	Ala	Leu	Tyr	Ser	Leu	Ala	Ile	Phe	Val
				85					90					95	
Val	Ile	Thr	Val	His											
				100											

<210> 3463

<211> 1734

<212> DNA

<213> Homo sapiens

<400> 3463

nngaggcgcc ggcttcggag tgcgcccgcc gccgcagcag cagcgctcct ggaggacccc
 60
 gccgtccccc ggctcaccgc tgcccttctt gctgctgagc taccgagcg gcggcggcgg
 120
 cagcagcgcc agggcaagca ccattcctaatt tatctcatgg ctaatgaacg catgaacctc
 180
 atgaacatgg ccaagctgag tatcaagggc ttgattgaat cagctctgaa cctgggggagg
 240
 actcttgact ctgactatgc acctctccag caattctttg tggtagatgga gcactgtctg
 300
 aaacatggct tgaaagctaa aaaaactttt ctccggacaaa ataaatcctt ctgggggcct
 360
 ctagaactgg tagaaaagct tgttccagaa gccgcagaga taacagcaag tggttaaagat
 420
 cttccaggac ttaagacacc agtaggtaga ggaagagcct ggcttcggtt ggcattaatg
 480

caaaagaaac tttcagaata tatgaaagct ttgatcaata agaaagaact tctcagtga
 540
 ttctacgaac ccaatgcctt catgatggaa gaagaaggag ccataattgc tggctctgtg
 600
 gtgggtctga atgtcattga tgccaatttc tgtatgaaag gagaagactt ggactctcag
 660
 gttggagtta tagatttttc aatgtatctc aaggacggga acagcagtaa aggtactgaa
 720
 ggagacggtc agattactgc aattctggac cagaagaact atgtagaaga actgaacaga
 780
 catttgaatg ctactgtaaa caaccttcag gcaaaagtag atgcattaga aaaatccaac
 840
 actaaactga cagaggagct tgcagttgca aacaacagga tcattacctt acaagaagaa
 900
 atggaacgag ttaaagagga aagttcctac atactggaat ccaatcggaa gggccccaa
 960
 caagacagaa ctgcagaagg gcaagcacta agtgaagcaa gaaagcattt aaaagaagag
 1020
 acacaattac gattggatgt tgagaaagaa ctggagatgc agatcagcat gaggcaggag
 1080
 atggaattgg ctatgaagat gctggagaag gatgtctgtg agaagcagga tgccttggt
 1140
 tctcttcggc agcagctgga tgacctcaga gctctcaagc atgaacttgc ctttaagctg
 1200
 cagagttcag acttaggagt aaaacagaaa agtgaactaa acagtcgctt ggaagagaag
 1260
 actaatcaga tggctgctac cattaaacaa cttgaacaaa ggtaaaaagtc ctgtttcttt
 1320
 aatgaaacac tttggattgt cagtgtgtaa gtgaaaagaa tgtgctgtac attcggcaaa
 1380
 tagaaaatac atgaaattct tccaaattag catcagacat tctggtagaa aaaagccagt
 1440
 tgaatgttat gtgtgttttc taaggatatga ctgaaatggt tttaggaaat gtcaatcact
 1500
 tgactagcct ttaaaaaaaaa aaaagaaagg tcagcctttt atgactgttt tgaacatcag
 1560
 aactcttaat ccatgtcaga gtcattgtgt agaggaagga tacttaaaag catggaagga
 1620
 ctcttaaatg tatgtatgta attctgtgat tttattgttc atcactgaag tctttgaata
 1680
 cttggatgct aggggatata gaggcactga gagatagggt tcctccaagg atcc
 1734

<210> 3464

<211> 434

<212> PRT

<213> Homo sapiens

<400> 3464

Xaa	Arg	Arg	Arg	Leu	Arg	Ser	Ala	Pro	Ala	Ala	Ala	Ala	Ala	Leu
1				5				10					15	
Leu	Glu	Asp	Pro	Ala	Val	Pro	Arg	Leu	Thr	Ala	Ala	Leu	Pro	Ala
			20					25				30		
Glu	Leu	Pro	Glu	Arg	Arg	Arg	Arg	Gln	Gln	Arg	Gln	Gly	Lys	His

```

      35              40              45
Pro Asn Tyr Leu Met Ala Asn Glu Arg Met Asn Leu Met Asn Met Ala
  50              55              60
Lys Leu Ser Ile Lys Gly Leu Ile Glu Ser Ala Leu Asn Leu Gly Arg
  65              70              75              80
Thr Leu Asp Ser Asp Tyr Ala Pro Leu Gln Gln Phe Phe Val Val Met
      85              90              95
Glu His Cys Leu Lys His Gly Leu Lys Ala Lys Lys Thr Phe Leu Gly
  100              105              110
Gln Asn Lys Ser Phe Trp Gly Pro Leu Glu Leu Val Glu Lys Leu Val
  115              120              125
Pro Glu Ala Ala Glu Ile Thr Ala Ser Val Lys Asp Leu Pro Gly Leu
  130              135              140
Lys Thr Pro Val Gly Arg Gly Arg Ala Trp Leu Arg Leu Ala Leu Met
  145              150              155              160
Gln Lys Lys Leu Ser Glu Tyr Met Lys Ala Leu Ile Asn Lys Lys Glu
      165              170              175
Leu Leu Ser Glu Phe Tyr Glu Pro Asn Ala Leu Met Met Glu Glu Glu
  180              185              190
Gly Ala Ile Ile Ala Gly Leu Leu Val Gly Leu Asn Val Ile Asp Ala
  195              200              205
Asn Phe Cys Met Lys Gly Glu Asp Leu Asp Ser Gln Val Gly Val Ile
  210              215              220
Asp Phe Ser Met Tyr Leu Lys Asp Gly Asn Ser Ser Lys Gly Thr Glu
  225              230              235              240
Gly Asp Gly Gln Ile Thr Ala Ile Leu Asp Gln Lys Asn Tyr Val Glu
      245              250              255
Glu Leu Asn Arg His Leu Asn Ala Thr Val Asn Asn Leu Gln Ala Lys
  260              265              270
Val Asp Ala Leu Glu Lys Ser Asn Thr Lys Leu Thr Glu Glu Leu Ala
  275              280              285
Val Ala Asn Asn Arg Ile Ile Thr Leu Gln Glu Glu Met Glu Arg Val
  290              295              300
Lys Glu Glu Ser Ser Tyr Ile Leu Glu Ser Asn Arg Lys Gly Pro Lys
  305              310              315              320
Gln Asp Arg Thr Ala Glu Gly Gln Ala Leu Ser Glu Ala Arg Lys His
      325              330              335
Leu Lys Glu Glu Thr Gln Leu Arg Leu Asp Val Glu Lys Glu Leu Glu
  340              345              350
Met Gln Ile Ser Met Arg Gln Glu Met Glu Leu Ala Met Lys Met Leu
  355              360              365
Glu Lys Asp Val Cys Glu Lys Gln Asp Ala Leu Val Ser Leu Arg Gln
  370              375              380
Gln Leu Asp Asp Leu Arg Ala Leu Lys His Glu Leu Ala Phe Lys Leu
  385              390              395              400
Gln Ser Ser Asp Leu Gly Val Lys Gln Lys Ser Glu Leu Asn Ser Arg
      405              410              415
Leu Glu Glu Lys Thr Asn Gln Met Ala Ala Thr Ile Lys Gln Leu Glu
  420              425              430
Gln Arg

```

<210> 3465

<211> 2904

<212> DNA

<213> Homo sapiens

<400> 3465

acgcgtccgc cggagcgggc catggacgcg ctcaagtcgg cggggcgggc gctgatccgg
60
agccccagct tggccaagca gagctggggg ggcggtggcc ggcaccgcaa gctgcctgag
120
aactggacag acacgcggga gacgctgctg gaggggatgc tgttcagcct caagtacctg
180
ggcatgacgc tagtggagca gccaagggt gaggagctgt cggccgccc catcaagagg
240
atcgtggcta cagctaaggc cagtgggaag aagctgcaga aggtgactct gaaggtgtcg
300
ccacggggaa ttatcctgac agacaacctc accaaccagc tcattgagaa cgtgtccata
360
tacaggatct cctattgcac agcagacaag atgcacgaca aggtgtttgc atacatcgcc
420
cagagccagc acaaccagag cctcgagtgc cacgccttcc tctgcacaa gcggaagatg
480
gcacaggctg ttaccctcac cgtagcccag gccttcaaag tcgcctttga gttttggcag
540
gtgtccaagg aagagaaaga gaagagggac aaagccagcc aagaggaggg ggacgtcctg
600
ggggcccgcc aagactgcac ccccccttg aagagcttgg tcgccactgg gaacctgctg
660
gacttagagg agacggctaa ggccccgctg tccacggtca gcgccaacac caccaacatg
720
gacgagggtc cgcggccaca agccttgagt ggcagcagtg ttgtctggga gctggatgat
780
ggcctggatg aagcgttttc gaggcttgcc cagtctcgga caaacctca ggtcctggac
840
actggcctga cagcccagga catgcattac gcccagtgcc tctcgctgt cgactgggac
900
aagcctgaca gcagcggcac agagcaggat gacctcttca gcttctgagg gccgggggcc
960
agccggacac aagcggccct gacacgtgat ggaccaaagc cacctgctgc gggggagcca
1020
gttctggggc ccgctgcca cctctcccag ccctcagcat tgtcagcctg aagatcagag
1080
ctgcagccag tcaggcaggg gagagatttt tcttttaagc cctgctcttt ctctgagaac
1140
caaaagatgc cttgaatatt tattcagtga cttctggctt atgctcagaa gccagtctgc
1200
gtcaggcacg tctcctgctg cgtgacatgt gcagtgtgt aatcggctcc cgcttgctct
1260
cctggagcaa gctctgccct ggctgtgggt atcaggactg tgaccaaagc atttctagtc
1320
ccttctctct ttctaaggac ccaaatttcc ctgggggcat cctgcttcc gaaagctgtt
1380
ggatttcagt gatttttccc cccaccccc agcacaggag agcacccaca gccgcagaag
1440
gggaatgtgt cctcctgctc tgcttccctc gggcccagca ggcgggggtt tgagccctgg
1500

accccaggct cttagagact aaggggcagc tcctgaccaa agacgatata gcttggcact
1560
ttaaagcatt aacagcaggt gtgaccctga gggctcctcc atggtgctgc attgagtcca
1620
gctttccttc tgcccttcct ccaggagaag gggcccaagg tccccgtgga tgggtctccac
1680
ctgtgcttgg aaccagtgtg actggctgct cctgctccc agggactgac acggggatca
1740
tctctgtgac cgccctccgt cgggcccctg cctgccttct cccctccacg caaggctgtg
1800
ctcttcctct ggtttctgtg tgtccgtttg agtgtctgag ccccgctcc ccatacttcc
1860
tgggatgatg tgtgaaacct gacacctaga tttatttggg aatattctat gaccacttta
1920
cagatgagga aactgaggcc tcaagcgtgg aggggtagag tgaagagtag aaccaggctc
1980
tgatgccaaa gctgctttct tctctgctc ctctcacgc aactcacacc tccttttctt
2040
ctagctttgt tgtcctccca ggaacaaaa aaccccagct attttctgaa caaatgtgt
2100
ttcataacaa accatctggt gcctttccac acagaactgg caggagcctc gtgtcctgct
2160
agctgtctct cttgttgatt tccgtgaaaa tgcaagtgtt tgaagtctgc tcattccgag
2220
ggtgaaacaa aatccaaccc tgtcagaatc atgctgttct ctttctgac actgtgacct
2280
tggttcggga cagaccagca gcaatctgtc tttagaatcg ctttccttcc tccccctttg
2340
ccccctggg gctcccggca tcctgaaagc cagcaaagcc tccagcatct tttccatcct
2400
gaggtgcctc ccagtggcct ggcttgtcgg agcaagtctc atcagcccta gggaaaacac
2460
ggccctcctg ggaacctcct tacctggagt aaccggacac cttagacgga ggtgcctgag
2520
ggtgggggtg gatttgcagg gtcattatca gaacatgagg ataacttctc tgcccttctg
2580
ctgtagccac ctccctggca ccggcctcta tttgtcataa ggcggcgtgg gcgaggcctg
2640
acacaggcca gccttggcac gaggggggccc aggggttctg agaagcgtg ccctgtgaga
2700
gccatgctgc cctgtgagag ccatgctggc ctctgtctcc atctctgggt gacgggctgt
2760
ccgtgtgcct cctgtgtgtc tgcagacaag tcttgcctgt ctttatttgt gaaacttta
2820
tgaggaaaaa acaaataata aatgttctcg ttttgaaact caaaaaaaaaa aaaaaaaaaa
2880
aaaaaaaaaa aaaaaaaaaa aaaa
2904

<210> 3466

<211> 315

<212> PRT

<213> Homo sapiens

<400> 3466

```

Thr Arg Pro Pro Glu Arg Ala Met Asp Ala Leu Lys Ser Ala Gly Arg
 1           5           10           15
Ala Leu Ile Arg Ser Pro Ser Leu Ala Lys Gln Ser Trp Gly Gly Gly
      20           25           30
Gly Arg His Arg Lys Leu Pro Glu Asn Trp Thr Asp Thr Arg Glu Thr
      35           40           45
Leu Leu Glu Gly Met Leu Phe Ser Leu Lys Tyr Leu Gly Met Thr Leu
      50           55           60
Val Glu Gln Pro Lys Gly Glu Glu Leu Ser Ala Ala Ala Ile Lys Arg
      65           70           75           80
Ile Val Ala Thr Ala Lys Ala Ser Gly Lys Lys Leu Gln Lys Val Thr
      85           90           95
Leu Lys Val Ser Pro Arg Gly Ile Ile Leu Thr Asp Asn Leu Thr Asn
      100          105          110
Gln Leu Ile Glu Asn Val Ser Ile Tyr Arg Ile Ser Tyr Cys Thr Ala
      115          120          125
Asp Lys Met His Asp Lys Val Phe Ala Tyr Ile Ala Gln Ser Gln His
      130          135          140
Asn Gln Ser Leu Glu Cys His Ala Phe Leu Cys Thr Lys Arg Lys Met
      145          150          155          160
Ala Gln Ala Val Thr Leu Thr Val Ala Gln Ala Phe Lys Val Ala Phe
      165          170          175
Glu Phe Trp Gln Val Ser Lys Glu Glu Lys Glu Lys Arg Asp Lys Ala
      180          185          190
Ser Gln Glu Gly Gly Asp Val Leu Gly Ala Arg Gln Asp Cys Thr Pro
      195          200          205
Pro Leu Lys Ser Leu Val Ala Thr Gly Asn Leu Leu Asp Leu Glu Glu
      210          215          220
Thr Ala Lys Ala Pro Leu Ser Thr Val Ser Ala Asn Thr Thr Asn Met
      225          230          235          240
Asp Glu Val Pro Arg Pro Gln Ala Leu Ser Gly Ser Ser Val Val Trp
      245          250          255
Glu Leu Asp Asp Gly Leu Asp Glu Ala Phe Ser Arg Leu Ala Gln Ser
      260          265          270
Arg Thr Asn Pro Gln Val Leu Asp Thr Gly Leu Thr Ala Gln Asp Met
      275          280          285
His Tyr Ala Gln Cys Leu Ser Pro Val Asp Trp Asp Lys Pro Asp Ser
      290          295          300
Ser Gly Thr Glu Gln Asp Asp Leu Phe Ser Phe
      305          310          315

```

<210> 3467

<211> 638

<212> DNA

<213> Homo sapiens

<400> 3467

```

acgcgtgaag ggcacggagg tattcattgt attattcttt caacctttat gaatgtatca
60
acatttgcaa aataaaaaag ttgtggagga ggaagaaaaa caaaaaccag gatgcactga
120
ggctctgaggt gaaggtccta ggagcatcag ttctctgttg ggatcaaggt tgctgggaca
180

```

gagcttgatc cctgtcaact gctaaaacaa tccaggacaa tccaatagta gagctgaatt
 240
 ttgattacct tggctctgag cttcacagcc ctttggcaga ggaaatcctg tgacactgag
 300
 gtgtaaccac aagactggcc caaactgacc ctattctggt ggtaacagga ggtatagcag
 360
 agccaaaact gaaagtcatt taaccgggac atgcacaaag gaggaaaatc ataactcgga
 420
 accaacgttt cctccctgtg gagccaagaa gacagggaca tgaccgggagc ttgaggggagc
 480
 gaacgctttc agaaggggaag ggtccattat cctggaagat ctgggtgctga aacctgccat
 540
 tccacacctt accataaatg gccaaagttta aagccctcct attgaaacct gcccgccagc
 600
 acttctgtgt gccaacctgt cctccctaac ccgtcgac
 638

<210> 3468

<211> 88

<212> PRT

<213> Homo sapiens

<400> 3468

Met	Ser	Leu	Ser	Ser	Trp	Leu	His	Arg	Glu	Glu	Thr	Leu	Val	Pro	Ser
1				5					10					15	
Tyr	Asp	Phe	Pro	Pro	Leu	Cys	Met	Ser	Gly	Leu	His	Asp	Phe	Gln	Phe
			20					25					30		
Trp	Leu	Cys	Tyr	Thr	Ser	Cys	Tyr	Gln	Gln	Asn	Arg	Val	Ser	Leu	Gly
		35				40						45			
Gln	Ser	Cys	Gly	Tyr	Thr	Ser	Val	Ser	Gln	Asp	Phe	Leu	Cys	Gln	Arg
	50					55				60					
Ala	Val	Lys	Leu	Arg	Thr	Lys	Val	Ile	Lys	Ile	Gln	Leu	Tyr	Tyr	Trp
65					70					75					80
Ile	Val	Leu	Asp	Cys	Phe	Ser	Ser								
					85										

<210> 3469

<211> 1710

<212> DNA

<213> Homo sapiens

<400> 3469

gccgcggctc cgggggaacgg ccgcgcacgc gcgccccggc tgcttctgct ctttctggtt
 60
 ccgctgctgt gggccccggc tgcggtccgg gccggcccag atgaagacct tagccaccgg
 120
 aacaaagaac cgccggcgcc ggcccagcag ctgcagccgc agcctgtggc tgtgcagggc
 180
 cccgagccgg cccgggtcga gaaaatattt acaccagcag ctccagttca taccaataaa
 240
 gaagatcctg ctacccaaac taatttgga tttatccatg catttgctgc tgccatatca
 300
 gttattattg tatctgaatt gggtgataag acatttttta tagcagccat catggcaatg
 360

cgtataacc gcctgaccgt gctggctggt gcaatgcttg ccttgggact aatgacatgc
420
ttgtcagttt tgtttggcta tgccaccaca gtcacccca gggctctatac atactatgtt
480
tcaactgtat tatttgccat ttttggcatt agaatgcttc ggggaaggctt aaagatgagc
540
cctgatgagg gtcaagagga actggaagaa gttcaagctg aattaaagaa gaaagatgaa
600
gaatttcaac gaaccaaact tttaaagtga ccgggagatg ttgaaacggg tacaagcata
660
acagtacctc agaaaaagtg gttgcatttt atttcaccca tttttgttca agctcttaca
720
ttaacattct tagcagaatg gggatgctgc tctcaactaa ctacaattgt attggcagct
780
agagaggacc cctatgggtg agccgtgggt ggaactgtgg ggcactgcct gtgcacggga
840
ttggcagtaa ttggaggaag aatgatagca cagaaaatct ctgtcagaac tgtgacaatc
900
ataggaggca tcgttttttt ggctgttgca ttttctgcac tatttataag ccctgattct
960
ggtttttaac aagctgtttg ttcattctata tttagttaa aataggtagt attatctttc
1020
tgtacatagt gtacattaca actaaaagta atgggaaaca ctgtattttg tagcattgat
1080
ttgtaagttt gaccactta attattatgc ccaaaagata taatcattga ttttatttgt
1140
aaagattttt aaaaaggttt gactcctaag tgtgggtttt tcttctctcc aacataatta
1200
tgtaaatatg gtctcattt ttcttttggg gcagaaccgt tgtgcagtgg ggtctaccat
1260
gcaattttct ttcagcactg accccttttt aaggaataca aattttctcc ttcactactt
1320
aggtgtttta agatgtttac cttaaagttt ttcttgggga aagaatgaat taatttctat
1380
ttcttaaaac atttcctga gccagtaaac agtagtttaa tcattggtct tttcaaaact
1440
aggtgtttta aaaaagagac atatatgata ttgctgttat atcaataaca tggcacaaca
1500
agaactgtct gccaggtcat tcttctcttt ttttttttaa ttgggtagga caccaatat
1560
aaaaacagtc aatatttgac aatgtggaat taccaaatta aaagagaata ctatgaatgt
1620
attcatattt tttctatatt gaataaaca tgtaacatag ataacaatat aaataaaagt
1680
ggtatgacca gtgaaaaaaaa aaaaaaaaaa
1710

<210> 3470

<211> 322

<212> PRT

<213> Homo sapiens

<400> 3470

Ala Ala Ala Pro Gly Asn Gly Arg Ala Ser Ala Pro Arg Leu Leu Leu

1	5	10	15
Leu Phe Leu Val	Pro Leu Leu Trp	Ala Pro Ala Ala	Val Arg Ala Gly
20	25	30	
Pro Asp Glu Asp	Leu Ser His Arg	Asn Lys Glu Pro	Pro Ala Pro Ala
35	40	45	
Gln Gln Leu Gln	Pro Gln Pro Val	Ala Val Gln Gly	Pro Glu Pro Ala
50	55	60	
Arg Val Glu Lys	Ile Phe Thr Pro	Ala Ala Pro Val	His Thr Asn Lys
65	70	75	80
Glu Asp Pro Ala	Thr Gln Thr Asn	Leu Gly Phe Ile	His Ala Phe Val
85	90	95	
Ala Ala Ile Ser	Val Ile Ile Val	Ser Glu Leu Gly	Asp Lys Thr Phe
100	105	110	
Phe Ile Ala Ala	Ile Met Ala Met	Arg Tyr Asn Arg	Leu Thr Val Leu
115	120	125	
Ala Gly Ala Met	Leu Ala Leu Gly	Leu Met Thr Cys	Leu Ser Val Leu
130	135	140	
Phe Gly Tyr Ala	Thr Thr Val Ile	Pro Arg Val Tyr	Thr Tyr Tyr Val
145	150	155	160
Ser Thr Val Leu	Phe Ala Ile Phe	Gly Ile Arg Met	Leu Arg Glu Gly
165	170	175	
Leu Lys Met Ser	Pro Asp Glu Gly	Gln Glu Glu Leu	Glu Glu Val Gln
180	185	190	
Ala Glu Leu Lys	Lys Lys Asp Glu	Glu Phe Gln Arg	Thr Lys Leu Leu
195	200	205	
Asn Gly Pro Gly	Asp Val Glu Thr	Gly Thr Ser Ile	Thr Val Pro Gln
210	215	220	
Lys Lys Trp Leu	His Phe Ile Ser	Pro Ile Phe Val	Gln Ala Leu Thr
225	230	235	240
Leu Thr Phe Leu	Ala Glu Trp Gly	Asp Arg Ser Gln	Leu Thr Thr Ile
245	250	255	
Val Leu Ala Ala	Arg Glu Asp Pro	Tyr Gly Val Ala	Val Gly Gly Thr
260	265	270	
Val Gly His Cys	Leu Cys Thr Gly	Leu Ala Val Ile	Gly Gly Arg Met
275	280	285	
Ile Ala Gln Lys	Ile Ser Val Arg	Thr Val Thr Ile	Ile Gly Gly Ile
290	295	300	
Val Phe Leu Ala	Phe Ala Phe Ser	Ala Leu Phe Ile	Ser Pro Asp Ser
305	310	315	320
Gly Phe			

<210> 3471

<211> 2335

<212> DNA

<213> Homo sapiens

<400> 3471

ggccgcgtgg ccctggccga catcgccctc accggcggcg gcaacatcgt ggtggccacg

60

gcggacggca gcagcgcgtc gcccgctgcag ttctacaagg tgtgcgtgag cgtgggtgagc

120

gagaagtgcc gtatcgacac ggagatcctg ccctccctgt tcatgcgctg caccaccgac

180

ctcaaccgca aggacaagtt ccccgccatc acccacctca agttcctggc ccgggacatg
240
tcggagcagg tgcttttgtg cgcgtccagc cagaccagca gcatcgtgga gtgctgggtcc
300
ctgcgcaagg agggactccc cgtgaacaac atcttccagc agatctcccc cgtgggttggc
360
gacaaacagc ccacaattct caaatggcgg atcctatcgg ccaccaacga tctggaccgt
420
gtgtcggccg tggcgctgcc caagctgccc atctcgctca ccaacaccga cctcaagggtg
480
gccagcgaca cacagttcta ccctggcctc gggctggccc tggccttcca cgacggcagc
540
gtccacatcg tgcaccggct ctcaactgcag accatggccg tcttctacag ctccgcggcc
600
ccgaggcctg tggatgagcc ggccatgaag cgcccccgca ccgcggggccc cgccgtccac
660
ttaaaggcta tgcagctatc gtggacgtca ctggccctgg tggggattga cagccacggg
720
aagctgagcg tgctccgcct ctacacctcc atgggccacc cgctggagggt ggggctggcg
780
ctgcggcacc tgctcttcct gctggagtac tgcattggtga ccggctacga ctggtgggac
840
atcctgctgc acgtgcagcc cagtatggta cagagcctgg tggagaagct gcacgaggag
900
tacacgcgcc agaccgctgc cctgcagcag gtcctctcca ccgggatcct ggccatgaag
960
gcctcgctct gcaagctgtc gccctgcacg gtgaccgcg tgtgogacta ccacaccaag
1020
ctcttctca tcgccatcag ctccacctg aagtcgctgc tgcgccccca ctttctcaac
1080
acgcctgaca agagccccgg cgaccggctg accgagatct gcaccaagat caccgacgtc
1140
gacattgaca aggtcatgat caacctcaag acggaggaat ttgtgctgga catgaacaca
1200
ctgcaggcgc tgcagcagct cttgcagtgg gtgggcgact tcgtgctgta cctgctggcc
1260
agcctaccca accagggttc cctgctgagg ccgggccaca gctttctgcg ggacggcacc
1320
tcgctgggca tgcttcggga attgatggtg gtcattcgca tctggggcct tctgaagccc
1380
agctgcctgc ccgtgtatac ggccacctcg gatacccagg acagcatgtc cctgctcttc
1440
cgctgctca ccaagctctg gatctgctgt cgcgatgagg gccagcgag cgagccggac
1500
gaggcgctgg tggatgaatg ctgcctgctg ccagccagc tgettatccc cagcctggac
1560
tggctgccag ccagcgacgg cctgggttagc cgctgcagc ccaagcagcc ccttcgtctg
1620
cagtttggcc gggcgccac gctgcctggc agtgctgcca ccctgcagct cgacggcctc
1680
gccagggccc caggccagcc caagatcgac cacctgcgga ggctgcacct tggcgcttgc
1740
cccacggagg aatgcaaggc ctgcaccagg tgcggctgtg tcaccatgct caagtcgccc
1800

aacagaacca cggcgggtgaa gcagtgggag cagcgctgga tcaagaactg cctgtgcggt
 1860
 gggctctggt ggcgggtgcc cctcagctac ccctgagccc agctgcccct cagctactcc
 1920
 tcagctaccc ctcagctgcc cctgagcccc gctgctgcaa gagccaccgc tcgccctgga
 1980
 ctctcctcgg cgcgggttaac ctcagcccg cctgcagggc tgttgaaggc cgtgggccgg
 2040
 acgcctgcgt gaccagcaga gcttctgagg aagcccctgc ccttgtccag ctgggccccg
 2100
 agtccacaca ccactctccc aggaccccca gatccctgga ccatctgcat ccagaggacc
 2160
 gtccgtgacg gccggggggtc caggcggacc ttgtggtgac ccggctcggg cgtctcctcg
 2220
 gtttccttgc ctcaccccg gagagcgctg aacctggaca agcagcggct gggaaggaca
 2280
 ggtccaataa acgccctctg cgcccaggaa aaaaaaaaaa aaaaaaaaaa aaaaa
 2335

<210> 3472

<211> 631

<212> PRT

<213> Homo sapiens

<400> 3472

Gly	Arg	Val	Ala	Leu	Ala	Asp	Ile	Ala	Phe	Thr	Gly	Gly	Gly	Asn	Ile
1				5					10					15	
Val	Val	Ala	Thr	Ala	Asp	Gly	Ser	Ser	Ala	Ser	Pro	Val	Gln	Phe	Tyr
			20					25					30		
Lys	Val	Cys	Val	Ser	Val	Val	Ser	Glu	Lys	Cys	Arg	Ile	Asp	Thr	Glu
		35					40					45			
Ile	Leu	Pro	Ser	Leu	Phe	Met	Arg	Cys	Thr	Thr	Asp	Leu	Asn	Arg	Lys
	50					55					60				
Asp	Lys	Phe	Pro	Ala	Ile	Thr	His	Leu	Lys	Phe	Leu	Ala	Arg	Asp	Met
65					70					75				80	
Ser	Glu	Gln	Val	Leu	Leu	Cys	Ala	Ser	Ser	Gln	Thr	Ser	Ser	Ile	Val
				85					90					95	
Glu	Cys	Trp	Ser	Leu	Arg	Lys	Glu	Gly	Leu	Pro	Val	Asn	Asn	Ile	Phe
			100					105					110		
Gln	Gln	Ile	Ser	Pro	Val	Val	Gly	Asp	Lys	Gln	Pro	Thr	Ile	Leu	Lys
		115					120					125			
Trp	Arg	Ile	Leu	Ser	Ala	Thr	Asn	Asp	Leu	Asp	Arg	Val	Ser	Ala	Val
	130					135					140				
Ala	Leu	Pro	Lys	Leu	Pro	Ile	Ser	Leu	Thr	Asn	Thr	Asp	Leu	Lys	Val
145					150					155				160	
Ala	Ser	Asp	Thr	Gln	Phe	Tyr	Pro	Gly	Leu	Gly	Leu	Ala	Leu	Ala	Phe
				165					170					175	
His	Asp	Gly	Ser	Val	His	Ile	Val	His	Arg	Leu	Ser	Leu	Gln	Thr	Met
		180						185					190		
Ala	Val	Phe	Tyr	Ser	Ser	Ala	Ala	Pro	Arg	Pro	Val	Asp	Glu	Pro	Ala
		195					200					205			
Met	Lys	Arg	Pro	Arg	Thr	Ala	Gly	Pro	Ala	Val	His	Leu	Lys	Ala	Met
	210					215					220				
Gln	Leu	Ser	Trp	Thr	Ser	Leu	Ala	Leu	Val	Gly	Ile	Asp	Ser	His	Gly

225					230					235				240	
Lys	Leu	Ser	Val	Leu	Arg	Leu	Ser	Pro	Ser	Met	Gly	His	Pro	Leu	Glu
				245					250					255	
Val	Gly	Leu	Ala	Leu	Arg	His	Leu	Leu	Phe	Leu	Leu	Glu	Tyr	Cys	Met
			260						265					270	
Val	Thr	Gly	Tyr	Asp	Trp	Trp	Asp	Ile	Leu	Leu	His	Val	Gln	Pro	Ser
		275					280						285		
Met	Val	Gln	Ser	Leu	Val	Glu	Lys	Leu	His	Glu	Glu	Tyr	Thr	Arg	Gln
	290						295					300			
Thr	Ala	Ala	Leu	Gln	Gln	Val	Leu	Ser	Thr	Arg	Ile	Leu	Ala	Met	Lys
305						310					315				320
Ala	Ser	Leu	Cys	Lys	Leu	Ser	Pro	Cys	Thr	Val	Thr	Arg	Val	Cys	Asp
				325					330					335	
Tyr	His	Thr	Lys	Leu	Phe	Leu	Ile	Ala	Ile	Ser	Ser	Thr	Leu	Lys	Ser
			340					345						350	
Leu	Leu	Arg	Pro	His	Phe	Leu	Asn	Thr	Pro	Asp	Lys	Ser	Pro	Gly	Asp
		355					360						365		
Arg	Leu	Thr	Glu	Ile	Cys	Thr	Lys	Ile	Thr	Asp	Val	Asp	Ile	Asp	Lys
	370						375					380			
Val	Met	Ile	Asn	Leu	Lys	Thr	Glu	Glu	Phe	Val	Leu	Asp	Met	Asn	Thr
385						390				395					400
Leu	Gln	Ala	Leu	Gln	Gln	Leu	Leu	Gln	Trp	Val	Gly	Asp	Phe	Val	Leu
				405					410					415	
Tyr	Leu	Leu	Ala	Ser	Leu	Pro	Asn	Gln	Gly	Ser	Leu	Leu	Arg	Pro	Gly
			420					425					430		
His	Ser	Phe	Leu	Arg	Asp	Gly	Thr	Ser	Leu	Gly	Met	Leu	Arg	Glu	Leu
		435					440					445			
Met	Val	Val	Ile	Arg	Ile	Trp	Gly	Leu	Leu	Lys	Pro	Ser	Cys	Leu	Pro
	450					455					460				
Val	Tyr	Thr	Ala	Thr	Ser	Asp	Thr	Gln	Asp	Ser	Met	Ser	Leu	Leu	Phe
465						470				475					480
Arg	Leu	Leu	Thr	Lys	Leu	Trp	Ile	Cys	Cys	Arg	Asp	Glu	Gly	Pro	Ala
				485					490					495	
Ser	Glu	Pro	Asp	Glu	Ala	Leu	Val	Asp	Glu	Cys	Cys	Leu	Leu	Pro	Ser
			500					505					510		
Gln	Leu	Leu	Ile	Pro	Ser	Leu	Asp	Trp	Leu	Pro	Ala	Ser	Asp	Gly	Leu
		515					520						525		
Val	Ser	Arg	Leu	Gln	Pro	Lys	Gln	Pro	Leu	Arg	Leu	Gln	Phe	Gly	Arg
	530					535					540				
Ala	Pro	Thr	Leu	Pro	Gly	Ser	Ala	Ala	Thr	Leu	Gln	Leu	Asp	Gly	Leu
545						550				555					560
Ala	Arg	Ala	Pro	Gly	Gln	Pro	Lys	Ile	Asp	His	Leu	Arg	Arg	Leu	His
				565					570					575	
Leu	Gly	Ala	Cys	Pro	Thr	Glu	Glu	Cys	Lys	Ala	Cys	Thr	Arg	Cys	Gly
			580					585					590		
Cys	Val	Thr	Met	Leu	Lys	Ser	Pro	Asn	Arg	Thr	Thr	Ala	Val	Lys	Gln
	595						600					605			
Trp	Glu	Gln	Arg	Trp	Ile	Lys	Asn	Cys	Leu	Cys	Gly	Gly	Leu	Trp	Trp
	610					615					620				
Arg	Val	Pro	Leu	Ser	Tyr	Pro									
625						630									

<210> 3473

<211> 1660

<212> DNA

<213> Homo sapiens

<400> 3473

taatgtgccc ccttagaagg acgtgtttct tggtttcaca cgtttgagtc tatgcaccag
60
ctggattttc acaaaggggt ctgaaccttg gctgttggcg agggcaaagt gggcgtggcg
120
gcgccatgcc cgggccggac tgagtgcgcg cgggcgagaa tggcgtagat ccagttggaa
180
ccattaaacg agggttttct ttctagaatc tctggtctgc tgctgtgcag atggacctgc
240
cggcactgct gtcagaagtg ctacgagtc agctgttgcc agtcaagtga ggatgaagtt
300
gaaattctgg gacctttccc tgctcagacc cctccctggc tgatggccag ccggagcagt
360
gacaaggatg gtgactctgt ccacacggcc agcgaagtcc cgctgacccc acggaccaat
420
tccccggatg gaagacgctc gtccctcagac acatccaagt ctacatacag cctgacgcgg
480
aggatttcga gtcttgagtc aagacgtccc agctctccac tcatcgatat taaacccatc
540
gagtttggcg ttctcagcgc caagaaggag cccatccaac cttcggtgct cagacggacc
600
tataaccccg acgactatct caggaagttc gaaccccacc tgtactccct cgactccaac
660
agcgacgatg tggactctct gacagacgag gagatcctgt ccaagtacca gctgggcatg
720
ctgcacttca gcaactcagta cgacctgctg cacaaccacc tcaccgtgcg cgtgatcgag
780
gccagggacc tgccacctcc catctcccac gatggctcgc gccaggacat ggcgcactcc
840
aacccttacg tcaagatctg tctcctgcca gaccagaaga actcaaagca gaccggggtc
900
aaacgcaaga ccagaagcc cgtgtttgag gagcgctaca ccttcgagat ccccttcctg
960
gaggcccaga ggaggaccct gtcctgacc gtggtggatt ttgataagtt ctcccgccac
1020
tgtgtcattg ggaaagtttc tgtgcctttg tgtgaagttg acctggtcaa gggcgggcac
1080
tggtggaagg cgctgattcc cagttctcag aatgaagtgg agctggggga gctgcttctg
1140
tactgaatt atctcccaag tgctggcaga ctgaatgttg atgtcattcg agccaagcaa
1200
cttcttcaga cagatgtgag ccaaggttca gaccctttg tgaaaatcca gctgggtgcat
1260
ggactcaaac ttgtgaaaac caagaagacg tccttcttaa ggggcacaat tgatcctttc
1320
tacaatgaat ccttcagctt caaagttccc caagaagaac tggaaaatgc cagcctagtg
1380
tttacagttt tcggccacaa catgaagagc agcaatgact tcatcgggag gatcgtcatt
1440
ggccagtact cttcaggccc ctctgagacc aaccactgga ggcgcatgct caacacgcac
1500

cgcacagccg tggagcagtg gcatagcctg aggtcccagag ctgagtgtga ccgcgtgtct
 1560
 cctgcctccc tggaggtgac ctgagggctg caggggaaggc agctttcatt tgtttaaaaa
 1620
 aaaaaagacg gaaaaaatg tgtcacatac tattacatcc
 1660

<210> 3474

<211> 474

<212> PRT

<213> Homo sapiens

<400> 3474

Met	Ala	Tyr	Ile	Gln	Leu	Glu	Pro	Leu	Asn	Glu	Gly	Phe	Leu	Ser	Arg
1				5					10					15	
Ile	Ser	Gly	Leu	Leu	Leu	Cys	Arg	Trp	Thr	Cys	Arg	His	Cys	Cys	Gln
			20					25					30		
Lys	Cys	Tyr	Glu	Ser	Ser	Cys	Cys	Gln	Ser	Ser	Glu	Asp	Glu	Val	Glu
		35					40					45			
Ile	Leu	Gly	Pro	Phe	Pro	Ala	Gln	Thr	Pro	Pro	Trp	Leu	Met	Ala	Ser
	50					55					60				
Arg	Ser	Ser	Asp	Lys	Asp	Gly	Asp	Ser	Val	His	Thr	Ala	Ser	Glu	Val
65				70					75					80	
Pro	Leu	Thr	Pro	Arg	Thr	Asn	Ser	Pro	Asp	Gly	Arg	Arg	Ser	Ser	Ser
				85					90					95	
Asp	Thr	Ser	Lys	Ser	Thr	Tyr	Ser	Leu	Thr	Arg	Arg	Ile	Ser	Ser	Leu
			100					105					110		
Glu	Ser	Arg	Arg	Pro	Ser	Ser	Pro	Leu	Ile	Asp	Ile	Lys	Pro	Ile	Glu
		115					120					125			
Phe	Gly	Val	Leu	Ser	Ala	Lys	Lys	Glu	Pro	Ile	Gln	Pro	Ser	Val	Leu
	130					135					140				
Arg	Arg	Thr	Tyr	Asn	Pro	Asp	Asp	Tyr	Phe	Arg	Lys	Phe	Glu	Pro	His
145				150					155					160	
Leu	Tyr	Ser	Leu	Asp	Ser	Asn	Ser	Asp	Asp	Val	Asp	Ser	Leu	Thr	Asp
			165					170						175	
Glu	Glu	Ile	Leu	Ser	Lys	Tyr	Gln	Leu	Gly	Met	Leu	His	Phe	Ser	Thr
		180					185						190		
Gln	Tyr	Asp	Leu	Leu	His	Asn	His	Leu	Thr	Val	Arg	Val	Ile	Glu	Ala
	195					200						205			
Arg	Asp	Leu	Pro	Pro	Pro	Ile	Ser	His	Asp	Gly	Ser	Arg	Gln	Asp	Met
	210					215					220				
Ala	His	Ser	Asn	Pro	Tyr	Val	Lys	Ile	Cys	Leu	Leu	Pro	Asp	Gln	Lys
225				230						235				240	
Asn	Ser	Lys	Gln	Thr	Gly	Val	Lys	Arg	Lys	Thr	Gln	Lys	Pro	Val	Phe
			245					250						255	
Glu	Glu	Arg	Tyr	Thr	Phe	Glu	Ile	Pro	Phe	Leu	Glu	Ala	Gln	Arg	Arg
		260					265						270		
Thr	Leu	Leu	Leu	Thr	Val	Val	Asp	Phe	Asp	Lys	Phe	Ser	Arg	His	Cys
	275						280					285			
Val	Ile	Gly	Lys	Val	Ser	Val	Pro	Leu	Cys	Glu	Val	Asp	Leu	Val	Lys
	290					295					300				
Gly	Gly	His	Trp	Trp	Lys	Ala	Leu	Ile	Pro	Ser	Ser	Gln	Asn	Glu	Val
305				310					315					320	
Glu	Leu	Gly	Glu	Leu	Leu	Leu	Ser	Leu	Asn	Tyr	Leu	Pro	Ser	Ala	Gly

```

          325          330          335
Arg Leu Asn Val Asp Val Ile Arg Ala Lys Gln Leu Leu Gln Thr Asp
          340          345          350
Val Ser Gln Gly Ser Asp Pro Phe Val Lys Ile Gln Leu Val His Gly
          355          360          365
Leu Lys Leu Val Lys Thr Lys Lys Thr Ser Phe Leu Arg Gly Thr Ile
          370          375          380
Asp Pro Phe Tyr Asn Glu Ser Phe Ser Phe Lys Val Pro Gln Glu Glu
385          390          395          400
Leu Glu Asn Ala Ser Leu Val Phe Thr Val Phe Gly His Asn Met Lys
          405          410          415
Ser Ser Asn Asp Phe Ile Gly Arg Ile Val Ile Gly Gln Tyr Ser Ser
          420          425          430
Gly Pro Ser Glu Thr Asn His Trp Arg Arg Met Leu Asn Thr His Arg
          435          440          445
Thr Ala Val Glu Gln Trp His Ser Leu Arg Ser Arg Ala Glu Cys Asp
          450          455          460
Arg Val Ser Pro Ala Ser Leu Glu Val Thr
465          470

```

<210> 3475

<211> 514

<212> DNA

<213> Homo sapiens

<400> 3475

```

acgcgtcttg agggctgggt cttctgcacg ccgcgccgca agctgctctg gctgggtgctg
60
cagcccttct tctactcact acggccgctc tgcgtccacc ccaaggccgt gaccgcgatg
120
gaggtgctca acacgctggt gcagctggcg gccgacctgg ccattctttgc cctttggggg
180
ctcaagcccc tgggtctacct gctggccagc tccttctctg gcctgggect gcaccccatc
240
tcggggccact tcgtggccga gcactacatg ttcttcaagg gccacgagac ctactcctac
300
tatgggcctc tcaactggat caccttcaat gtgggctacc acgtggagca ccacgacttc
360
cccagcatcc cgggctacaa cctgccgctg gtgcggaaga tcgcgcccga gtactacgac
420
cacctgccgc agcaccactc ctgggtgaag gtgctctggg attttgtgtt tgaggactcc
480
ctgggggccct atgccagggt gaagcgggtg taca
514

```

<210> 3476

<211> 171

<212> PRT

<213> Homo sapiens

<400> 3476

```

Thr Arg Leu Glu Gly Trp Phe Phe Cys Thr Pro Ala Arg Lys Leu Leu
1          5          10          15
Trp Leu Val Leu Gln Pro Phe Phe Tyr Ser Leu Arg Pro Leu Cys Val

```

```

                20                25                30
His Pro Lys Ala Val Thr Arg Met Glu Val Leu Asn Thr Leu Val Gln
                35                40                45
Leu Ala Ala Asp Leu Ala Ile Phe Ala Leu Trp Gly Leu Lys Pro Val
                50                55                60
Val Tyr Leu Leu Ala Ser Ser Phe Leu Gly Leu Gly Leu His Pro Ile
65                70                75                80
Ser Gly His Phe Val Ala Glu His Tyr Met Phe Leu Lys Gly His Glu
                85                90                95
Thr Tyr Ser Tyr Tyr Gly Pro Leu Asn Trp Ile Thr Phe Asn Val Gly
                100                105                110
Tyr His Val Glu His His Asp Phe Pro Ser Ile Pro Gly Tyr Asn Leu
                115                120                125
Pro Leu Val Arg Lys Ile Ala Pro Glu Tyr Tyr Asp His Leu Pro Gln
                130                135                140
His His Ser Trp Val Lys Val Leu Trp Asp Phe Val Phe Glu Asp Ser
145                150                155                160
Leu Gly Pro Tyr Ala Arg Val Lys Arg Val Tyr
                165                170

```

<210> 3477
 <211> 356
 <212> DNA
 <213> Homo sapiens

```

<400> 3477
gcgcgcctcg gctgcctgcc cggcgggtctc cgggtcctcg tccagaccgg ccaccggagc
60
ttgacctcct gcatcgaccc ttccatggga cttaatgaag agcagaaaga atttcaaaaa
120
gtggcctttg actttgtctgc cggagagatg gctccaaata tggcagagtg ggaccagaag
180
gtaggcgttt ttcttgtgct tagacgttct aacaacagat gtctcaggca gacctttatc
240
tttgtctccc gataatgtaa ttgttaaattg tctcctccac ttaccaactc ttactgcaag
300
tgagaatacc ggtagtggat gatttttctc agaaggcac ctgatcatct tgtaca
356

```

<210> 3478
 <211> 116
 <212> PRT
 <213> Homo sapiens

```

<400> 3478
Met Ile Arg Met Pro Ser Arg Lys Asn His Pro Leu Pro Val Phe Ser
1         5         10        15
Leu Ala Val Arg Val Gly Lys Trp Arg Arg His Leu Thr Ile Thr Leu
20        25        30
Ser Gly Asp Lys Asp Lys Gly Leu Pro Glu Thr Ser Val Val Arg Thr
35        40        45
Ser Lys His Lys Lys Asn Ala Tyr Leu Leu Val Pro Leu Cys His Ile
50        55        60
Trp Ser His Leu Ser Gly Ser Lys Val Lys Gly His Phe Leu Lys Phe

```

```

65          70          75          80
Phe Leu Leu Phe Ile Lys Ser His Gly Arg Val Asp Ala Gly Gly Gln
          85          90          95
Ala Pro Val Ala Gly Leu Asp Glu Asp Pro Glu Thr Ala Gly Gln Ala
          100          105          110
Ala Glu Ala Arg
          115

```

<210> 3479
 <211> 797
 <212> DNA
 <213> Homo sapiens

```

<400> 3479
nctttccaac ccagcctgaa ggggaaagcc acctcggagg acaccctcaa tctaaggaga
60
taccccggtc ctgacaggat catgctgcag aagtggcaga aaagggacat cagcaatttt
120
gagtatctca tgtacctcaa caccgcggct gggagaacct gcaatgacta catgcagtac
180
ccagtgttcc cctgggtcct cgcagactac acctcagaga cattgaactt ggcaaatccg
240
aagattttcc gggatctttc aaagcccatg ggggctcaga ccaaggaaag gaagctgaaa
300
tttatccaga ggttttaaaga agttgagaaa actgaaggag acatgactgc ccagtgccac
360
tactacaccc actactcttc ggccatcacc gtggcctcct acctgggtccg gatgccaccc
420
ttcaccacag ccttctgcgc tctgcagggt agctgctgcc actctctgta cacacacaca
480
cacacacaca cacacacata cgctgtatc acaagactaa gacctgtgct tgaacaaaga
540
caggatgcct ctgctaaaaa cttagtcatt agccagtgat tcccagttga cattgggtcc
600
aggattctgg ctcaccagcc aaggcaggct gttcttcttc agttacacct gcacatctgc
660
ccaacaaagt cttgcaaaat gattctaaaa aataagaaat gagacatgaa aaaaatgatt
720
taacataaat aagatttagt ggaaaaagaa aaagcaggaa acttggagac tagaaaggca
780
ggcgggtcaag gattaga
797

```

<210> 3480
 <211> 192
 <212> PRT
 <213> Homo sapiens

```

<400> 3480
Xaa Phe Gln Pro Ser Leu Lys Gly Lys Ala Thr Ser Glu Asp Thr Leu
  1          5          10          15
Asn Leu Arg Arg Tyr Pro Gly Ser Asp Arg Ile Met Leu Gln Lys Trp
          20          25          30
Gln Lys Arg Asp Ile Ser Asn Phe Glu Tyr Leu Met Tyr Leu Asn Thr

```

```
<210> 3481
<211> 1794
<212> DNA
<213> Homo sapiens
```

2649

tggcccaggg agcactaatt ccaagaggca ggccacttgg ttcttggaga aggagaagag
 900
 cagactgctg gctgaggcag cacttgagtt gcgggaggag aacacgaggc aggaacggat
 960
 tctggccctg gccaagcgac tagccatgct gcggggacag gaccccgaga gagtgaccct
 1020
 ccaggactat cgctcccag acagtgatga cgacgaggat gaggagacag ccatccaaag
 1080
 agtcctgcag cagctcactg aagaagcttc cctggatgag gcaagtggct ttaacatccc
 1140
 tgcagagcag gcttctcgac cctggacgca accccgcggg gcagagcctg agggccagga
 1200
 tgtggacccc aggcctgagg ctgaggaaga ggagctcccc tggtgctgca tctgcaatga
 1260
 ggatgccacc ctacgtgctg ctggctgcga tggggacctc ttctgtgccc gctgcttccg
 1320
 agagggccat gatgcctttg agcttaaaga gcaccagaca tctgcctact ctctccacg
 1380
 tgcaggccaa gagcactgaa gacaccctgg tcctcccga agggcagtcc cacaggcagc
 1440
 ggcacccatt tctgggcccc gccacaggac gtccgatggg agagcttgct tggctctact
 1500
 gatgatggat agggcccttc ctgagccttg gtgtccctgg aatgaggaaa gattctccat
 1560
 tcgagagaat gactgggagg gaagaagtcg gggccctcct attagaagcc cagactggaa
 1620
 gtgagaggca tgatgggggag agaccagact gaatctacgg gtgagccctg taacctggct
 1680
 ctagggcaca ggcccctccc ctggcactta gtgggtctaa taaagtatgt tgattcattg
 1740
 ggaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa
 1794

<210> 3482

<211> 206

<212> PRT

<213> Homo sapiens

<400> 3482

Met	Pro	Pro	Ser	Gly	His	His	Leu	Ser	Ser	Ala	Asp	Pro	Ala	Val	Leu
1				5				10						15	
Gly	Ala	Thr	Met	Glu	Ser	Arg	Cys	Tyr	Gly	Cys	Ala	Val	Lys	Phe	Thr
			20					25					30		
Leu	Phe	Lys	Lys	Glu	Tyr	Gly	Cys	Lys	Asn	Cys	Gly	Arg	Xaa	Phe	Cys
		35					40					45			
Ser	Gly	Cys	Leu	Ser	Phe	Ser	Ala	Ala	Val	Pro	Arg	Thr	Gly	Asn	Thr
	50					55				60					
Gln	Gln	Lys	Val	Cys	Lys	Gln	Cys	His	Glu	Val	Leu	Thr	Arg	Gly	Ser
65				70						75				80	
Ser	Ala	Asn	Ala	Ser	Lys	Trp	Ser	Pro	Pro	Gln	Asn	Tyr	Lys	Lys	Arg
			85						90					95	
Val	Ala	Ala	Leu	Glu	Ala	Lys	Gln	Lys	Pro	Ser	Thr	Ser	Gln	Ser	Gln
			100					105					110		
Gly	Leu	Thr	Arg	Gln	Asp	Gln	Met	Ile	Ala	Glu	Arg	Leu	Ala	Arg	Leu

115	120	125
Arg Gln Glu Asn Lys Pro Lys Leu Val Pro Ser Gln Ala Glu Ile Glu		
130	135	140
Ala Arg Leu Ala Ala Leu Lys Asp Glu Arg Gln Gly Ser Ile Pro Ser		
145	150	155
Thr Gln Glu Met Glu Ala Arg Leu Ala Ala Leu Gln Gly Arg Val Leu		
165	170	175
Pro Ser Gln Thr Pro Gln Pro Gly Thr Ser His Thr Gly His Gln Asp		
180	185	190
Pro Ser Pro Ala Asp Thr Gly Ser Ala Asn Ala Ala Gly Ser		
195	200	205

<210> 3483

<211> 477

<212> DNA

<213> Homo sapiens

<400> 3483

```

ncggccgcgg cgcggaacgg cgctcccgcc cccaccatgg gcaacagcgc gagccgcaac
60
gacttcgagt gggctctacac cgaccagccg cacacgcagc ggcgcaagga gatactggcc
120
aagtacccgg ccatcaaggc cctgatgcgg ccagaccgcg gcctcaagtg ggcggggctg
180
gtgctggtgc tgggtgcagat gctggcctgc tggctggtgc gcgggctggc ctggcgctgg
240
ctgctgttct gggcctacgc ctttggtggc tgcgtgaacc actcgctgac gctggccatc
300
cacgacatct cgcacaacgc ggccttcggc acgggcccgtg cggcacgcaa ccgctggctg
360
gccgtgttcg ccaacctgcc cgtgggtgtg ccctacgccg cctccttcaa gaagtaccac
420
gtggaccacc accgctacct gggcgggcgac ggactggacg tggacgtgcc cacgcgt
477

```

<210> 3484

<211> 147

<212> PRT

<213> Homo sapiens

<400> 3484

Met Gly Asn Ser Ala Ser Arg Asn Asp Phe Glu Trp Val Tyr Thr Asp	
1	15
Gln Pro His Thr Gln Arg Arg Lys Glu Ile Leu Ala Lys Tyr Pro Ala	
20	30
Ile Lys Ala Leu Met Arg Pro Asp Pro Arg Leu Lys Trp Ala Gly Leu	
35	45
Val Leu Val Leu Val Gln Met Leu Ala Cys Trp Leu Val Arg Gly Leu	
50	60
Ala Trp Arg Trp Leu Leu Phe Trp Ala Tyr Ala Phe Gly Gly Cys Val	
65	80
Asn His Ser Leu Thr Leu Ala Ile His Asp Ile Ser His Asn Ala Ala	
85	95
Phe Gly Thr Gly Arg Ala Ala Arg Asn Arg Trp Leu Ala Val Phe Ala	

```
<400> 3486
Met Arg Val Pro Ser Ala Leu Val Thr Leu His Met Leu Leu Cys Ser
 1                5                10                15
Ile Pro Leu Ser Gly Arg Leu Asp Ser Asp Glu Gln Lys Ile Gln Asn
      20                25                30
Asp Ile Ile Asp Ile Leu Leu Thr Phe Thr Gln Gly Val Asn Glu Lys
```

	35					40						45							
Leu	Thr	Ile	Ser	Glu	Glu	Thr	Leu	Ala	Asn	Asn	Thr	Trp	Ser	Leu	Met				
	50					55					60								
Leu	Lys	Glu	Val	Leu	Ser	Ser	Ile	Leu	Lys	Val	Pro	Glu	Gly	Phe	Phe				
65					70					75					80				
Ser	Gly	Leu	Ile	Leu	Ser	Glu	Leu	Leu	Pro	Leu	Pro	Leu	Pro	Leu	Met				
			85					90						95					
Gln	Thr	Thr	Gln	Val	Ser	Leu	Pro	His	Asn	Met	His	Leu	Ile	Asn	Asp				
			100					105						110					
Cys	Ser	Asn	Thr	Phe															
			115																

<210> 3487

<211> 772

<212> DNA

<213> Homo sapiens

<400> 3487

```

nnattgtatc aaaatcctag atttgaataa cttattatct taaataatca gtaactaaaa
60
ccaagcaatc catcacacaa agaggggaaa gggtaatatt ctgagttata aattttttac
120
cctgtctgat aaaaatagaa gcctgaaagt ttaaattttt cctggattta aatttaaaga
180
taaatttggt ttccagtga atatacctcaa tagcaatttt accaaagagg ccttcttctg
240
aaggccacct ctgaaataat tagaggataa atgtcaatgg catgatatta agatattact
300
tggccaggcg tggtcgtcac gcgtgtaatc ccagcacttt gggaggccga ggcagggtgga
360
tcacgaggtc aagaaatcga gaccagcctg gctaacacag tgaaaccccg tctcattctg
420
agcttcttga caccttttta tccagtcact gaaattagca tctgcaccta gaaagaaaaa
480
actgactata acatcactca tctgcacaac ctattaatca gcaaatactt actgaatacc
540
tactacatcc caggcagtgt tctaggcact ggggagtcgg cagcgaacaa aacctgtctt
600
aacagacctt atcaccaact ctactatagt tataaacata ccaatagttt aacatttagt
660
tgtaatcat gaaacatttt gattttttta aaattttaac tacagtcaac cttaatttca
720
cagatacaaa taatctgcat ttcccccaat cccgctgctc ttagagaagc tt
772

```

<210> 3488

<211> 59

<212> PRT

<213> Homo sapiens

<400> 3488

Asp	Ile	Thr	Trp	Pro	Gly	Val	Val	Val	Thr	Arg	Val	Ile	Pro	Ala	Leu				
1				5					10				15						
Trp	Glu	Ala	Glu	Ala	Gly	Gly	Ser	Arg	Gly	Gln	Glu	Ile	Glu	Thr	Ser				

20 25 30
 Leu Ala Asn Thr Val Lys Pro Arg Leu Ile Leu Ser Phe Leu Thr Pro
 35 40 45
 Phe Asn Pro Val Thr Glu Ile Ser Ile Cys Thr
 50 55

<210> 3489
 <211> 288
 <212> DNA
 <213> Homo sapiens

<400> 3489
 tagctaacac tccactatgg gagcccatct cctcccaggg ccaggagagac caggagagacc
 60
 agggagacca ggtctggccc ccaactctaa ggctcatctt agaggcgaga ttcaggccca
 120
 gcccaggggtg ccccatgagg cctgggtggtt ggaggcagag ggtatccctt gcccaaattc
 180
 gtgccacatt cacagtcact gggaaagcta cggggatggg ccgggcgcgg tgggtcacac
 240
 ctgtaatccc agcactttgg agagccccaa gacgacggat cacgagtc
 288

<210> 3490
 <211> 90
 <212> PRT
 <213> Homo sapiens

<400> 3490
 Met Gly Ala His Leu Leu Pro Gly Pro Gly Arg Pro Gly Arg Pro Gly
 1 5 10 15
 Arg Pro Gly Leu Ala Pro Asn Ser Lys Ala His Leu Arg Gly Glu Ile
 20 25 30
 Gln Ala Gln Pro Arg Val Pro His Glu Ala Trp Trp Leu Glu Ala Glu
 35 40 45
 Gly Ile Pro Cys Pro Asn Ser Cys His Ile His Ser His Trp Glu Ser
 50 55 60
 Tyr Gly Asp Gly Pro Gly Ala Val Ala His Thr Cys Asn Pro Ser Thr
 65 70 75 80
 Leu Glu Ser Pro Lys Thr Thr Asp His Glu
 85 90

<210> 3491
 <211> 568
 <212> DNA
 <213> Homo sapiens

<400> 3491
 ggggaaccgac gtccctctgt ggtgaaattc cacccttca cgccgtgcat cgccgtagcc
 60
 gacaaggaca gcatctgctt ttgggactgg gagaaagggg agaagctgga ttatttccac
 120
 aatgggaacc ctcggtacac gagggtcact gccatggagt atctgaatgg ccaggactgc
 180

tcgcttctgc tgacggccac agacgatggt gccatcaggg tctggaagaa ttttgctgat
 240
 ttggaaaaga acccagagat ggtgaccgcg tggcaggggc tctcggacat gctgccaacg
 300
 acgcgaggag ctgggatggt ggtggactgg gagcaggaga cgggcctcct catgagctca
 360
 ggagacgtgc ggatcgccg gatctgggac acagaccgtg agatgaaggt gcaggacatc
 420
 cctacgggcg cagacagctg tgtgacgagt ctgtcctgtg attcccaccg ctcactcatc
 480
 gtggctggcc tcggtgacgg ctccatccgc gtctacgaca gaaggatggc actcagcgaa
 540
 tgccgcgtca tgacgtaccg ggagcaca
 568

<210> 3492

<211> 189

<212> PRT

<213> Homo sapiens

<400> 3492

Gly	Asn	Arg	Arg	Pro	Ser	Val	Val	Lys	Phe	His	Pro	Phe	Thr	Pro	Cys
1				5					10					15	
Ile	Ala	Val	Ala	Asp	Lys	Asp	Ser	Ile	Cys	Phe	Trp	Asp	Trp	Glu	Lys
			20					25					30		
Gly	Glu	Lys	Leu	Asp	Tyr	Phe	His	Asn	Gly	Asn	Pro	Arg	Tyr	Thr	Arg
		35					40					45			
Val	Thr	Ala	Met	Glu	Tyr	Leu	Asn	Gly	Gln	Asp	Cys	Ser	Leu	Leu	Leu
	50					55					60				
Thr	Ala	Thr	Asp	Asp	Gly	Ala	Ile	Arg	Val	Trp	Lys	Asn	Phe	Ala	Asp
65					70					75				80	
Leu	Glu	Lys	Asn	Pro	Glu	Met	Val	Thr	Ala	Trp	Gln	Gly	Leu	Ser	Asp
			85					90					95		
Met	Leu	Pro	Thr	Thr	Arg	Gly	Ala	Gly	Met	Val	Val	Asp	Trp	Glu	Gln
			100					105					110		
Glu	Thr	Gly	Leu	Leu	Met	Ser	Ser	Gly	Asp	Val	Arg	Ile	Val	Arg	Ile
	115						120					125			
Trp	Asp	Thr	Asp	Arg	Glu	Met	Lys	Val	Gln	Asp	Ile	Pro	Thr	Gly	Ala
	130					135					140				
Asp	Ser	Cys	Val	Thr	Ser	Leu	Ser	Cys	Asp	Ser	His	Arg	Ser	Leu	Ile
145					150					155				160	
Val	Ala	Gly	Leu	Gly	Asp	Gly	Ser	Ile	Arg	Val	Tyr	Asp	Arg	Arg	Met
			165					170					175		
Ala	Leu	Ser	Glu	Cys	Arg	Val	Met	Thr	Tyr	Arg	Glu	His			
			180					185							

<210> 3493

<211> 2244

<212> DNA

<213> Homo sapiens

<400> 3493

nggggggggat atccatgcag cgatcaggat gaaagagggtg attcaggaca accaagtaat
 60

aaggaactgt ttggagatga cagtgaggac gagggagctt cacatcatag tggtagtgat
120
aatcactctg aaagatcaga caatagatca gaagcttctg agcggttctga ccatgaggac
180
aatgaccctt cagatgtaga tcagcacagt ggatcagaag cccctaataga tgatgaagac
240
gaaggtcata gatcggatgg agggagccat cattcagaag cagaaggttc tgaaaaagca
300
cattcagatg atgaaaaatg gggcagagaa gataaaagt accagtcaga tgatgaaaag
360
atacaaaaatt ctgatgatga ggagagggca caaggatctg atgaagataa gctgcagaat
420
tctgacgatg atgagaaaat gcagaacaca gatgatgagg agaggcctca gctttccgat
480
gatgagagac aacagctatc tgaggaggaa aaggctaatt ctgatgatga acggccggta
540
gcttctgata atgatgatga gaaacagaat tctgatgatg aagaacaacc acagctgtct
600
gatgaagaga aaatgcaaaa ttctgatgat gaaaggccac aggccccaga tgaagaacac
660
aggcattcag atgatgaaga ggaacaggat cataaatcag aatccgcaag aggcagtgat
720
agtgaagatg aagttttacg aatgaaacgc aagaatgcga ttgcatctga ttcagaagcg
780
gatagtgaca ctgaggtgcc aaaagataat agtggaacca tggatttatt tggaggtgca
840
gatgatatct cttcagggag tgatggagaa gacaaaccac ctactccagg acagcctggt
900
gatgaaaatg gattgcctca ggatcaacag gaagaggagc caattcctga gaccagaata
960
gaagtagaaa tacccaaagt aaacactgat ttaggaaacg acttatatatt tgttaaactg
1020
cccaactttc tcagtgtaga gccagacct tttgatcctc agtattatga agatgaattt
1080
gaagatgaag aaatgctgga tgaagaagg taaaccaggt taaaattaaa ggtagaaaat
1140
actataagat ggaggatacg ccgagatgaa gaaggaaatg aaattaaaga aagcaatgct
1200
cggatagtca agtggtcaga tggaagcatg tccctgcatt taggcaatga agtgtttgat
1260
gtgtacaaag cccactgca gggcgaccac aatcatcttt ttataagaca aggtactggt
1320
ctacagggac aagcagtctt taaagcgaaa ctcaccttca gacctcactc tacggacagt
1380
gccacacata gaaagatgac tctgtcactt gcagataggt gttcaaagac acagaagatt
1440
agaatcttgc caatggctgg tcgtgatcct gaatgccaac gcacagaaat gattaagaaa
1500
gaagaagaac gtttgagggc ttccatacgt agggaatctc agcagcgccg aatgagagag
1560
aaacagcacc agcgggggct gagcgccagt tacctggaac ctgatcgata cgatgaggag
1620
gaggaaggcg aggagtccat cagcttggct gccattaaaa accgatataa agggggcatt
1680

cgagaggaac gagccagaat ctattcatca gacagtgatg agggatcaga agaagataaa
 1740
 gctcaaagat tactcaaagc aaagaaactt accagtgatg aggaagggtga accttccgga
 1800
 aagagaaaag cagaagatga tgataaagca aataaaaagc ataagaagta tgtgatcagc
 1860
 gatgaagagg aagaagatga tgattgaagt atgaaatatg aaaacatttt atatatttta
 1920
 ttgtacagtt ataaatatgt aaacatgagt tatttttgatt gaaatgaatc gatttgcttt
 1980
 tgtgtaattt taattgtaat aaaacaattt aaaagcaagt ctctatgttt aagaaatcta
 2040
 cttttccggc caggcgcggt ggctcatgcc tgtaatccca gcacttcggg aggccgaggc
 2100
 aggtggatca caaggtcgtg gtggcgggtg cctgtagtcg cagctactcg ggaggctgag
 2160
 gcgggggaat tggttgaacc caggaggcag aggttgcagt tagccgagat cgcgccactg
 2220
 cactccagcc tggcgacaga gcta
 2244

<210> 3494

<211> 628

<212> PRT

<213> Homo sapiens

<400> 3494

Xaa	Gly	Gly	Tyr	Pro	Cys	Ser	Asp	Gln	Asp	Glu	Arg	Gly	Asp	Ser	Gly
1				5				10					15		
Gln	Pro	Ser	Asn	Lys	Glu	Leu	Phe	Gly	Asp	Asp	Ser	Glu	Asp	Glu	Gly
			20					25				30			
Ala	Ser	His	His	Ser	Gly	Ser	Asp	Asn	His	Ser	Glu	Arg	Ser	Asp	Asn
		35				40					45				
Arg	Ser	Glu	Ala	Ser	Glu	Arg	Ser	Asp	His	Glu	Asp	Asn	Asp	Pro	Ser
	50					55					60				
Asp	Val	Asp	Gln	His	Ser	Gly	Ser	Glu	Ala	Pro	Asn	Asp	Asp	Glu	Asp
65					70					75				80	
Glu	Gly	His	Arg	Ser	Asp	Gly	Gly	Ser	His	His	Ser	Glu	Ala	Glu	Gly
			85					90						95	
Ser	Glu	Lys	Ala	His	Ser	Asp	Asp	Glu	Lys	Trp	Gly	Arg	Glu	Asp	Lys
		100						105					110		
Ser	Asp	Gln	Ser	Asp	Asp	Glu	Lys	Ile	Gln	Asn	Ser	Asp	Asp	Glu	Glu
	115					120						125			
Arg	Ala	Gln	Gly	Ser	Asp	Glu	Asp	Lys	Leu	Gln	Asn	Ser	Asp	Asp	Asp
	130					135						140			
Glu	Lys	Met	Gln	Asn	Thr	Asp	Asp	Glu	Glu	Arg	Pro	Gln	Leu	Ser	Asp
145					150					155				160	
Asp	Glu	Arg	Gln	Gln	Leu	Ser	Glu	Glu	Glu	Lys	Ala	Asn	Ser	Asp	Asp
			165					170						175	
Glu	Arg	Pro	Val	Ala	Ser	Asp	Asn	Asp	Asp	Glu	Lys	Gln	Asn	Ser	Asp
		180						185					190		
Asp	Glu	Glu	Gln	Pro	Gln	Leu	Ser	Asp	Glu	Glu	Lys	Met	Gln	Asn	Ser
	195					200						205			
Asp	Asp	Glu	Arg	Pro	Gln	Ala	Pro	Asp	Glu	Glu	His	Arg	His	Ser	Asp

210	215	220
Asp Glu Glu Glu Gln	Asp His Lys Ser Glu	Ser Ala Arg Gly Ser Asp
225	230	235
Ser Glu Asp Glu Val	Leu Arg Met Lys Arg	Lys Asn Ala Ile Ala Ser
245	250	255
Asp Ser Glu Ala Asp	Ser Asp Thr Glu Val	Pro Lys Asp Asn Ser Gly
260	265	270
Thr Met Asp Leu Phe	Gly Gly Ala Asp Asp	Ile Ser Ser Gly Ser Asp
275	280	285
Gly Glu Asp Lys Pro	Pro Thr Pro Gly Gln	Pro Val Asp Glu Asn Gly
290	295	300
Leu Pro Gln Asp Gln	Gln Glu Glu Glu Pro	Ile Pro Glu Thr Arg Ile
305	310	315
Glu Val Glu Ile Pro	Lys Val Asn Thr Asp	Leu Gly Asn Asp Leu Tyr
325	330	335
Phe Val Lys Leu Pro	Asn Phe Leu Ser Val	Glu Pro Arg Pro Phe Asp
340	345	350
Pro Gln Tyr Tyr Glu	Asp Glu Phe Glu Asp	Glu Glu Met Leu Asp Glu
355	360	365
Glu Gly Arg Thr Arg	Leu Lys Leu Lys Val	Glu Asn Thr Ile Arg Trp
370	375	380
Arg Ile Arg Arg Asp	Glu Glu Gly Asn Glu	Ile Lys Glu Ser Asn Ala
385	390	395
Arg Ile Val Lys Trp	Ser Asp Gly Ser Met	Ser Leu His Leu Gly Asn
405	410	415
Glu Val Phe Asp Val	Tyr Lys Ala Pro Leu	Gln Gly Asp His Asn His
420	425	430
Leu Phe Ile Arg Gln	Gly Thr Gly Leu Gln	Gly Gln Ala Val Phe Lys
435	440	445
Ala Lys Leu Thr Phe	Arg Pro His Ser Thr	Asp Ser Ala Thr His Arg
450	455	460
Lys Met Thr Leu Ser	Leu Ala Asp Arg Cys	Ser Lys Thr Gln Lys Ile
465	470	475
Arg Ile Leu Pro Met	Ala Gly Arg Asp Pro	Glu Cys Gln Arg Thr Glu
485	490	495
Met Ile Lys Lys Glu	Glu Glu Arg Leu Arg	Ala Ser Ile Arg Arg Glu
500	505	510
Ser Gln Gln Arg Arg	Met Arg Glu Lys Gln	His Gln Arg Gly Leu Ser
515	520	525
Ala Ser Tyr Leu Glu	Pro Asp Arg Tyr Asp	Glu Glu Glu Gly Glu
530	535	540
Glu Ser Ile Ser Leu	Ala Ala Ile Lys Asn	Arg Tyr Lys Gly Gly Ile
545	550	555
Arg Glu Glu Arg Ala	Arg Ile Tyr Ser Ser	Asp Ser Asp Glu Gly Ser
565	570	575
Glu Glu Asp Lys Ala	Gln Arg Leu Leu Lys	Ala Lys Lys Leu Thr Ser
580	585	590
Asp Glu Glu Gly Glu	Pro Ser Gly Lys Arg	Lys Ala Glu Asp Asp Asp
595	600	605
Lys Ala Asn Lys Lys	His Lys Lys Tyr Val	Ile Ser Asp Glu Glu Glu
610	615	620
Glu Asp Asp Asp		
625		

<210> 3495
 <211> 1085
 <212> DNA
 <213> Homo sapiens

<400> 3495
 cggggggccag ggtgccggca ggggcgtccg gggcgctctg accggcctcg cccgcccccc
 60
 cgcagacaca agatggtgaa ggagaccag tactatgaca tcctgggcgt gaagcccagc
 120
 gcgtcccccg aggagatcaa gaaggcctat cggaagctgg cgctcaagta ccaccggac
 180
 aagaaccccg atgagggcga gaagtttaaa ctcatatccc aggcataatga agtgctttca
 240
 gatccaaaga aaagggatgt ttatgaccaa ggcggagagc aggcaattaa agaaggaggc
 300
 tcaggcagcc ccagcttctc ttcacccatg gacatctttg acatgttctt tgggtggtggt
 360
 ggacggatgg ctagagagag aagaggcaag aatgttgtag accagttatc tgtaactctt
 420
 gaagatctat ataatggagt cacgaagaaa ttggccctcc agaaaaatgt aatttgtagag
 480
 aaatgtgaag gtgttggtgg gaagaaggga tcggtggaga agtgcccgtc gtgcaagggg
 540
 cgggggatgc agatccacat ccagcagatc gggccgggca tggtagagca gatccagacc
 600
 gtgtgcatcg agtgcaaggg ccagggtgag cgcatacaacc ccaaggaccg ctgcgagagc
 660
 tgcagcgggg ccaaggatgat ccgtgagaag aagattatcg aggtacatgt tgaaaaaggt
 720
 atgaaagatg ggcaaaagat actatttcat ggagaaggag atcaggagcc tgagctggag
 780
 cctggtgatg tcataattgt gcttgatcag aaggatcata gtgtctttca gagacgaggg
 840
 catgacttga tcatgaaaat gaaaattcag ctttctgaag ctctttgtgg cttcaagaag
 900
 acgataaaaa cattggacaa tcgaattctt gttattacat ccaaagcagg tgaggtgata
 960
 aagcacgggg acctgagatg cgtgcgcgat gaaggaatgc ccatctacaa agcaccctg
 1020
 gaaaaaggga ttctgatcat acagttttta gtaatctttc ctganaaaca ctggctttct
 1080
 ctgga
 1085

<210> 3496
 <211> 337
 <212> PRT
 <213> Homo sapiens

<400> 3496
 Met Val Lys Glu Thr Gln Tyr Tyr Asp Ile Leu Gly Val Lys Pro Ser
 1 5 10 15
 Ala Ser Pro Glu Glu Ile Lys Lys Ala Tyr Arg Lys Leu Ala Leu Lys

		20						25						30					
Tyr	His	Pro	Asp	Lys	Asn	Pro	Asp	Glu	Gly	Glu	Lys	Phe	Lys	Leu	Ile				
		35						40						45					
Ser	Gln	Ala	Tyr	Glu	Val	Leu	Ser	Asp	Pro	Lys	Lys	Arg	Asp	Val	Tyr				
		50						55						60					
Asp	Gln	Gly	Gly	Glu	Gln	Ala	Ile	Lys	Glu	Gly	Gly	Ser	Gly	Ser	Pro				
65					70					75					80				
Ser	Phe	Ser	Ser	Pro	Met	Asp	Ile	Phe	Asp	Met	Phe	Phe	Gly	Gly	Gly				
				85					90					95					
Gly	Arg	Met	Ala	Arg	Glu	Arg	Arg	Gly	Lys	Asn	Val	Val	His	Gln	Leu				
			100					105						110					
Ser	Val	Thr	Leu	Glu	Asp	Leu	Tyr	Asn	Gly	Val	Thr	Lys	Lys	Leu	Ala				
		115					120						125						
Leu	Gln	Lys	Asn	Val	Ile	Cys	Glu	Lys	Cys	Glu	Gly	Val	Gly	Gly	Lys				
		130				135					140								
Lys	Gly	Ser	Val	Glu	Lys	Cys	Pro	Leu	Cys	Lys	Gly	Arg	Gly	Met	Gln				
145					150					155					160				
Ile	His	Ile	Gln	Gln	Ile	Gly	Pro	Gly	Met	Val	Gln	Gln	Ile	Gln	Thr				
			165						170					175					
Val	Cys	Ile	Glu	Cys	Lys	Gly	Gln	Gly	Glu	Arg	Ile	Asn	Pro	Lys	Asp				
		180						185					190						
Arg	Cys	Glu	Ser	Cys	Ser	Gly	Ala	Lys	Val	Ile	Arg	Glu	Lys	Lys	Ile				
		195					200						205						
Ile	Glu	Val	His	Val	Glu	Lys	Gly	Met	Lys	Asp	Gly	Gln	Lys	Ile	Leu				
		210				215					220								
Phe	His	Gly	Glu	Gly	Asp	Gln	Glu	Pro	Glu	Leu	Glu	Pro	Gly	Asp	Val				
225					230					235					240				
Ile	Ile	Val	Leu	Asp	Gln	Lys	Asp	His	Ser	Val	Phe	Gln	Arg	Arg	Gly				
			245						250					255					
His	Asp	Leu	Ile	Met	Lys	Met	Lys	Ile	Gln	Leu	Ser	Glu	Ala	Leu	Cys				
		260						265					270						
Gly	Phe	Lys	Lys	Thr	Ile	Lys	Thr	Leu	Asp	Asn	Arg	Ile	Leu	Val	Ile				
		275					280						285						
Thr	Ser	Lys	Ala	Gly	Glu	Val	Ile	Lys	His	Gly	Asp	Leu	Arg	Cys	Val				
		290				295					300								
Arg	Asp	Glu	Gly	Met	Pro	Ile	Tyr	Lys	Ala	Pro	Leu	Glu	Lys	Gly	Ile				
305					310					315					320				
Leu	Ile	Ile	Gln	Phe	Leu	Val	Ile	Phe	Pro	Xaa	Lys	His	Trp	Leu	Ser				
			325					330						335					

Leu

<210> 3497

<211> 1638

<212> DNA

<213> Homo sapiens

<400> 3497

nnaagttaaa aataaatttt caaaccttat catattttact ttaccaacaa tcttgattac
60

gtggcaactt tgttgctata attttatgca gcagataaaag gtagacgttc ctccccaaag
120

tttttagtat atcctttctaa aaagttttcc tgagaatttt tagtttggcc tctcaagttt
180

ccttatttta ccttttctta aattacctcc ctcttctctt agtgaaatga gccttccttc
240
agcatacgca acttatcctt attgcttttt tcatacccaa ttttttggtt tatctctttc
300
agccaactgg gtctctgaagt agctgaaatg cgaaaaaggc agcagtccca aaatgaagga
360
acacctgctg tgtctcaagc tcctggaaac cagaggccca acaacacctg ttgcttttgt
420
tggtgctggt gttgcagctg ctctgcctc actgtgagga atgaagaaag aggggaaaaat
480
gcgggaagac ccacacacac tacaaaaatg gagagtatcc aggtcctaga ggaatgccaa
540
aaccceactg cagaggaagt cttgtcctgg tctcaaaatt ttgacaagat gatgaaggcc
600
ccagcaggaa gaaacctttt cagagagttc ctccgaacag aatacagtga agagaacct
660
cttttctggc ttgcttggtg agacttaaag aaggagcaga acaaaaaagt aattgaagaa
720
aaggctagga tgatatatga agattacatt tctatactat caccaaaaga ggtcagtctt
780
gattctcgag ttagagaggt gatcaataga aatctgttgg atcccaatcc tcacatgtat
840aacttcagat atatacttta atgcacagag attcttttcc aagggttttg 900
aactctcaaa tttataagtc atttgttgaa agtactgctg gctcttcttc tgaatcttaa
960
tgttcattta aaaacaatca ttttggaggg ctgagatggg aaataaaagt agttaataa
1020
catcagaaac tgagttcctg gagaactaca gtttagcatt cctcaggcta ctgtgaaaac
1080
acaaccgtta tgggtcttgg ctccattttt atcaaggttt tccatgggta agtttggaga
1140
aaataccaca caaaacaatg aattgccaaa ttgtttgttt tattcaagac tcattctact
1200
tgcaagcaaa gtgtatttgg agtcctatga acagtctcct cgtgtatctc cagagactgc
1260
atgtgcaaaag taaaatgctt catttgccac atagttgttg taatatttaa tccagtagca
1320
taacttatat ctgtatttaa ggacttttgg gcaatatggg cttaagaaat aattgccaaa
1380
aaaatcggcc atggtttgca ttttttaaca taatctaaga cagaaaaaaaa gcaattttta
1440
ctatgtaaca atggatttca acattctata tactgtgttt agtacactaa ttttgaagcc
1500
aatatttctg tacatgaaaa agagctatct atctctgttt gttggaaaat cctaattggg
1560
attcctctgg ttgttctact ccaaaactgt ggcattttca ttacaggaga gtttactatg
1620
ctaaaagcaa aaaacaaa
1638

<210> 3498

<211> 210

<212> PRT

<213> Homo sapiens

<400> 3498

```

Met Arg Lys Arg Gln Gln Ser Gln Asn Glu Gly Thr Pro Ala Val Ser
 1          5          10          15
Gln Ala Pro Gly Asn Gln Arg Pro Asn Asn Thr Cys Cys Phe Cys Trp
          20          25          30
Cys Cys Cys Cys Ser Cys Ser Cys Leu Thr Val Arg Asn Glu Glu Arg
          35          40          45
Gly Glu Asn Ala Gly Arg Pro Thr His Thr Thr Lys Met Glu Ser Ile
          50          55          60
Gln Val Leu Glu Glu Cys Gln Asn Pro Thr Ala Glu Glu Val Leu Ser
          65          70          75          80
Trp Ser Gln Asn Phe Asp Lys Met Met Lys Ala Pro Ala Gly Arg Asn
          85          90          95
Leu Phe Arg Glu Phe Leu Arg Thr Glu Tyr Ser Glu Glu Asn Leu Leu
          100          105          110
Phe Trp Leu Ala Cys Glu Asp Leu Lys Lys Glu Gln Asn Lys Lys Val
          115          120          125
Ile Glu Glu Lys Ala Arg Met Ile Tyr Glu Asp Tyr Ile Ser Ile Leu
          130          135          140
Ser Pro Lys Glu Val Ser Leu Asp Ser Arg Val Arg Glu Val Ile Asn
          145          150          155          160
Arg Asn Leu Leu Asp Pro Asn Pro His Met Tyr Glu Asp Ala Gln Leu
          165          170          175
Gln Ile Tyr Thr Leu Met His Arg Asp Ser Phe Pro Arg Phe Leu Asn
          180          185          190
Ser Gln Ile Tyr Lys Ser Phe Val Glu Ser Thr Ala Gly Ser Ser Ser
          195          200          205
Glu Ser
          210

```

<210> 3499

<211> 732

<212> DNA

<213> Homo sapiens

<400> 3499

```

ntatggagca atccggtngt gtcctgagcc ttggctgctc actcctccgg tcctggcgct
60
gtcctgattc gtcctcacag ccctgacctg gcagaagctt cactcctgcc ccagaccccc
120
tgccacgggc ggcgtcccag cctggcacag aggtattgtg attcccanaa tggccaagnc
180
aacagactcn aacctcagga tngttctatt ttcgcccaga agcaataatt tttttttcct
240
tctggaaagc cctttcaaga tagtgatggt gatgtggggg cacggcggtc gccgggtaca
300
tggaggtacc ggggtcacag cagcgcaagc accgggaagc agggagcccc tggtcctgac
360
tgggcctgta tttttcatgt tgttcttcag ccctctcggc atgggtccgga ggcgacggca
420
gtcctcagt cccctcccac tcctgctggt cccctcggac atggggcaca cgactcagga
480
ccaggccaga ggcaaaggca aggagcaggc agtacgccag caagagtccc tgtccacggg
540

```

agcccatctt cctgccgggc cctccgtccc gccggccgct cctcccgcgc cgtcccctaga
 600
 gcatctcccg ccggccaagc ctctcccg ccanggtccg gggcgatgca cagactcggg
 660
 gaaggaaaca gagcagggga aaaggtcttc cggaggacgg cagtgcagaa gaggaggggtg
 720
 gggggcggtg cg
 732

<210> 3500

<211> 168

<212> PRT

<213> Homo sapiens

<400> 3500

Phe	Phe	Phe	Pro	Ser	Gly	Lys	Pro	Phe	Gln	Asp	Ser	Asp	Val	Asp	Val
1				5					10				15		
Gly	Ala	Arg	Arg	Ser	Pro	Gly	Thr	Trp	Arg	Tyr	Arg	Gly	His	Ser	Ser
			20					25					30		
Ala	Ser	Thr	Gly	Lys	Gln	Gly	Ala	Pro	Gly	Pro	Asp	Trp	Ala	Cys	Ile
			35				40					45			
Phe	His	Val	Val	Leu	Gln	Pro	Ser	Arg	His	Gly	Pro	Glu	Ala	Thr	Ala
	50					55					60				
Ala	Pro	Gln	Ser	Pro	Pro	Thr	Pro	Ala	Val	Pro	Pro	Gly	His	Gly	Ala
65					70					75					80
His	Asp	Ser	Gly	Pro	Gly	Gln	Arg	Gln	Arg	Gln	Gly	Ala	Gly	Ser	Thr
				85				90						95	
Pro	Ala	Arg	Val	Pro	Val	His	Gly	Ser	Pro	Ser	Ser	Cys	Arg	Ala	Leu
			100					105					110		
Arg	Pro	Ala	Gly	Arg	Ser	Ser	Arg	Ala	Ala	Pro	Arg	Ala	Ser	Pro	Ala
			115				120					125			
Gly	Gln	Ala	Ser	Ser	Arg	Pro	Xaa	Ser	Gly	Ala	Met	His	Arg	Leu	Gly
			130				135				140				
Glu	Gly	Asn	Arg	Ala	Gly	Glu	Lys	Val	Phe	Arg	Arg	Thr	Ala	Val	Gln
145					150					155					160
Lys	Arg	Arg	Val	Gly	Gly	Gly	Thr								
					165										

<210> 3501

<211> 691

<212> DNA

<213> Homo sapiens

<400> 3501

nnagtagcaa ccgccggaat ggcgaaagca acaacaatca aagaagcctt agcgagatgg
 60
 gaagagaaaa ctggccagag gccatctgaa gccaaagaga taaaacttta tgccagatt
 120
 ccccctatag agaagatgga tgcattccttg tccatgcttg ctaattgcga gaagctttca
 180
 ctgtctacaa actgcattga aaaaattgcc aacctgaatg gcttaaaaaa cttgaggata
 240
 ttatcttttag gaagaaacaa cataaagaac ttaaatggac tggaggcagt aggggacaca
 300

ttagaagaac tgtggatctc ctacaatttt attgagaagt tgaaagggat ccacataatg
 360
 aagaaattga agattctcta catgtctaata aacctggtaa aagactgggc tgagtttgtg
 420
 aagctggcag aactgccatg cctcgaagac ctgggtgtttg taggcaatcc cttggaagag
 480
 aaacattctg ctgagaataa ctggattgaa gaagcaacca agagagtgcc caaactgaaa
 540
 aagctggatg gtactccagt aattaaaggg gatgaggaag aagacaacta atgccacgct
 600
 ttccactgtg tgttaactta tttaaatgtc ataagaacaa tagataaatt ttatataatt
 660
 gtctatttta aaaaaaaaaa aaaaaaaaaa a
 691

<210> 3502

<211> 196

<212> PRT

<213> Homo sapiens

<400> 3502

Xaa	Val	Ala	Thr	Ala	Gly	Met	Ala	Lys	Ala	Thr	Thr	Ile	Lys	Glu	Ala
1				5					10					15	
Leu	Ala	Arg	Trp	Glu	Glu	Lys	Thr	Gly	Gln	Arg	Pro	Ser	Glu	Ala	Lys
			20					25					30		
Glu	Ile	Lys	Leu	Tyr	Ala	Gln	Ile	Pro	Pro	Ile	Glu	Lys	Met	Asp	Ala
		35					40					45			
Ser	Leu	Ser	Met	Leu	Ala	Asn	Cys	Glu	Lys	Leu	Ser	Leu	Ser	Thr	Asn
	50					55					60				
Cys	Ile	Glu	Lys	Ile	Ala	Asn	Leu	Asn	Gly	Leu	Lys	Asn	Leu	Arg	Ile
65					70				75					80	
Leu	Ser	Leu	Gly	Arg	Asn	Asn	Ile	Lys	Asn	Leu	Asn	Gly	Leu	Glu	Ala
			85					90					95		
Val	Gly	Asp	Thr	Leu	Glu	Glu	Leu	Trp	Ile	Ser	Tyr	Asn	Phe	Ile	Glu
			100					105					110		
Lys	Leu	Lys	Gly	Ile	His	Ile	Met	Lys	Lys	Leu	Lys	Ile	Leu	Tyr	Met
		115					120					125			
Ser	Asn	Asn	Leu	Val	Lys	Asp	Trp	Ala	Glu	Phe	Val	Lys	Leu	Ala	Glu
	130					135					140				
Leu	Pro	Cys	Leu	Glu	Asp	Leu	Val	Phe	Val	Gly	Asn	Pro	Leu	Glu	Glu
145					150					155				160	
Lys	His	Ser	Ala	Glu	Asn	Asn	Trp	Ile	Glu	Glu	Ala	Thr	Lys	Arg	Val
			165					170					175		
Pro	Lys	Leu	Lys	Lys	Leu	Asp	Gly	Thr	Pro	Val	Ile	Lys	Gly	Asp	Glu
			180					185					190		
Glu	Glu	Asp	Asn												
			195												

<210> 3503

<211> 857

<212> DNA

<213> Homo sapiens

<400> 3503

gggcgccca ggtggagcgc gtcggggcccc tggatccggg gaaacggcca aggttgcggg
 60
 agtctcttca ctctcgtctc aaagccattt tgtgccgctg ccgctgcctc tacggccata
 120
 aatgcccaga gattagcgga gaagctccga gcccagaaac gggaacaaga cacaagaag
 180
 gagccggtgt ccacaaacgc tgttcagcgg agagtgcag aaatagtgcg gttcacacgg
 240
 cagctgcagc gagtccaccc caacgtgctt gctaaggcac tgacccgagg aattctccac
 300
 caggacaaga accttgtggt catcaataag ccctacggtc tccctgtgca tgggtggccct
 360
 ggggtccagc tctgcatcac tgatgtacta cctatcctgg caaagatgct tcatggccac
 420
 aaggcagagc ccttgcattt gtgccaccgg ctggacaagg aaaccacagg tgtaatggtg
 480
 ttggcttggg acaaggacat ggcacatcaa gtccaagagt tgtttagaac ccgtcaggtg
 540
 gtgaagaagt actgggcat cactgtgcat gtcccatgc cctcagcagg agtcgtggac
 600
 atccccattg tggagaagga ggggcaaggc cagcagcaac accccagaat gacattgtcc
 660
 ccgagctccc gcatggacga tgggaaaatg gtgaaagtgc ggcgcagccg gaatgcgcaa
 720
 gttgctgtaa ctcaagtacca ggtgctcagc agcactctct cctccgccct cgtggagctc
 780
 cagcccatca ctggaataaa acatcagctt cgagttcact tgtcttttgg attggattgt
 840
 ccaatccttg gtgatca
 857

<210> 3504

<211> 285

<212> PRT

<213> Homo sapiens

<400> 3504

Ala	Ala	Pro	Arg	Trp	Ser	Ala	Ser	Gly	Pro	Trp	Ile	Arg	Gly	Asn	Gly
1				5				10					15		
Gln	Gly	Cys	Gly	Ser	Leu	Phe	Thr	Leu	Val	Ser	Lys	Pro	Phe	Cys	Ala
			20					25					30		
Ala	Ala	Ala	Ala	Ser	Thr	Ala	Ile	Asn	Ala	Gln	Arg	Leu	Ala	Glu	Lys
			35				40					45			
Leu	Arg	Ala	Gln	Lys	Arg	Glu	Gln	Asp	Thr	Lys	Lys	Glu	Pro	Val	Ser
			50			55					60				
Thr	Asn	Ala	Val	Gln	Arg	Arg	Val	Gln	Glu	Ile	Val	Arg	Phe	Thr	Arg
65					70					75				80	
Gln	Leu	Gln	Arg	Val	His	Pro	Asn	Val	Leu	Ala	Lys	Ala	Leu	Thr	Arg
				85				90					95		
Gly	Ile	Leu	His	Gln	Asp	Lys	Asn	Leu	Val	Val	Ile	Asn	Lys	Pro	Tyr
			100					105					110		
Gly	Leu	Pro	Val	His	Gly	Gly	Pro	Gly	Val	Gln	Leu	Cys	Ile	Thr	Asp
			115				120					125			
Val	Leu	Pro	Ile	Leu	Ala	Lys	Met	Leu	His	Gly	His	Lys	Ala	Glu	Pro

130	135	140
Leu His Leu Cys His	Arg Leu Asp Lys Glu Thr	Thr Gly Val Met Val
145	150	155
Leu Ala Trp Asp Lys	Asp Met Ala His Gln Val	Gln Glu Leu Phe Arg
165	170	175
Thr Arg Gln Val Val	Lys Lys Tyr Trp Ala Ile	Thr Val His Val Pro
180	185	190
Met Pro Ser Ala Gly	Val Val Asp Ile Pro Ile	Val Glu Lys Glu Gly
195	200	205
Gln Gly Gln Gln Gln	His Pro Arg Met Thr	Leu Ser Pro Ser Ser Arg
210	215	220
Met Asp Asp Gly Lys	Met Val Lys Val Arg Arg	Ser Arg Asn Ala Gln
225	230	235
Val Ala Val Thr Gln	Tyr Gln Val Leu Ser Ser	Thr Leu Ser Ser Ala
245	250	255
Leu Val Glu Leu Gln	Pro Ile Thr Gly Ile Lys	His Gln Leu Arg Val
260	265	270
His Leu Ser Phe Gly	Leu Asp Cys Pro Ile	Leu Gly Asp
275	280	285

<210> 3505

<211> 1612

<212> DNA

<213> Homo sapiens

<400> 3505

```

gtgcacgagc tgcattctcag cgccctgcag aaggcccagg tggccctcat gacactgacg
60
ctcttcccgg tccggctcct ggttgccgct gccatgatgc tgctggcctg gcccctcgca
120
cttgctgcac ccctgggctc tgcggagaag gaacccgagc agcccccggc cctgtggagg
180
aagggttggtg acttctctgt gaaggccatc atgcgcacca tgtggttcgc cggcggcttc
240
caccgggtgg ccgtgaaggg gcggcaggcg ctgccaccg aggcggccat cctcacgctc
300
gcgcctcact cgtcctactt cgacgccatc cctgtgacca tgacgatgtc ctccatcgtg
360
atgaagacag agagcagaga catcccgatc tggggaactc tgatccagta tatacggcct
420
gtgttcgtgt cccggtcaga ccaggattct cgcaggaaaa cagtagaaga aatcaagaga
480
cgggcgcagt ccaacggaaa gtggccacag ataatgattt ttccagaagg aacttgatca
540
aacaggacct gcctaattac cttcaaacct ggtgcattca tccctggagc gcccgctccac
600
cctgggggttt tacgatatcc aaataaactg gacaccatca catggacgtg gcaaggacct
660
ggagcgtggt aaatcctgtg gctcacgctg tgtcagtttc acaaccaagt ggaaatcgag
720
ttccttctct tgtacagccc ttctgaggag gagaagagga accccgcgct gtatgccagc
780
aacgtgcggc gagtcattgg cgaggccttg ggtgtctccg tgactgacta cacgttcgag
840

```


gactgccagc tggccctggc ggaaggacag ctccgtctcc ccgctgacac ttgcctttta
 900
 gaatttgcca ggctcgtgcg gggcctcggg ctaaaaccag aaaagcttga aaaagatctg
 960
 gacagatact cagaaagagc caggatgaag ggaggagaga agataggtat tgcggagttt
 1020
 gccgcctccc tggaagtccc cgtttctgac ttgctggaag acatgttttc actgttcgac
 1080
 gagagcggca gcggcgaggt ggacctgcga gagtgtgtgg ttgccctgtc tgcgtctgc
 1140
 tggccggccc ggaccctgga caccatccag ctggctttca agatgtacgg agcgcaagag
 1200
 gacggcagcg tcggcgaagg tgacctgtcc tgcacccca agacggccct gggggtggca
 1260
 gagctcactg tgaccgacct attccgagcc attgaccaag aggagaaggg gaagatcaca
 1320
 ttcgtgact tccacaggtt tgcagaaatg taccctgcct tcgcagagga atacctgtac
 1380
 ccggatcaga cacatttcga aagctgtgca gagacctcac ctgcgccaat cccaaacggc
 1440
 ttctgtgccg atttcagccc ggaaaactca gacgctgggc ggaagcctgt tcgcaagaag
 1500
 ctggattagg acccaggggt gcggagagac gcggccctc ccgctggac atcaccgcca
 1560
 tgagcctctt tgcgagtac ctctgggctc cgctcctcac tcctgctgta ca
 1612

<210> 3506

<211> 502

<212> PRT

<213> Homo sapiens

<400> 3506

Val His Glu Leu His Leu Ser Ala Leu Gln Lys Ala Gln Val Ala Leu
 1 5 10 15
 Met Thr Leu Thr Leu Phe Pro Val Arg Leu Leu Val Ala Ala Met
 20 25 30
 Met Leu Leu Ala Trp Pro Leu Ala Leu Val Ala Ser Leu Gly Ser Ala
 35 40 45
 Glu Lys Glu Pro Glu Gln Pro Pro Ala Leu Trp Arg Lys Val Val Asp
 50 55 60
 Phe Leu Leu Lys Ala Ile Met Arg Thr Met Trp Phe Ala Gly Gly Phe
 65 70 75 80
 His Arg Val Ala Val Lys Gly Arg Gln Ala Leu Pro Thr Glu Ala Ala
 85 90 95
 Ile Leu Thr Leu Ala Pro His Ser Ser Tyr Phe Asp Ala Ile Pro Val
 100 105 110
 Thr Met Thr Met Ser Ser Ile Val Met Lys Thr Glu Ser Arg Asp Ile
 115 120 125
 Pro Ile Trp Gly Thr Leu Ile Gln Tyr Ile Arg Pro Val Phe Val Ser
 130 135 140
 Arg Ser Asp Gln Asp Ser Arg Arg Lys Thr Val Glu Glu Ile Lys Arg
 145 150 155 160
 Arg Ala Gln Ser Asn Gly Lys Trp Pro Gln Ile Met Ile Phe Pro Glu

nacgcgttga cgacgatgaa gatggcccca agtgtggaag tgggtgcctct gtccagaccc
 60
 ccaggagagg cttcccactc actcttgggg gctgtgtcca cacagggact ctgcagcagc
 120

cgagcccgcct ccccgccatc cgtgctcaag tcccactcgc tgtagtcatt gttgatgctg
 180
 acctggggcca tggccccgag agccttcttc ctgcaaggtc tgtgggttct gccttacaac
 240
 cacatgcctc agggagctga gcaacaccca cctgtttggg gctgttagct taggactctt
 300
 ctcaacctgc tctttctccc tgatgggctg tgccagaggc gggtgctatg tgaggtggcc
 360
 atcgctgtct acacctttgg cacctgcatt gccttcctaa tcatcattgg cgaccagcag
 420
 gacaagatta tagctgtgat ggcgaaagag ccggaggggg ccagcggccc ttggtacaca
 480
 gaccgcaagt tcaccatcag cctcactgcc ttctcttca tcctgcccct ctccatcccc
 540
 agggagattg gtttccagaa atatgccagc ttcttgagcg tcgtgggtac ctggtacgtc
 600
 acagccatcg ttatcatcaa gtacatctgg ccagataaag agatgacccc agggaacatc
 660
 ctgaccaggc cggcttctg gatggctgtg ttcaatgcca tgcccacat ctgcttcgga
 720
 tttcagtgcc acgtcagcag tgtgcccgtc ttcaacagca tgcagcagcc tgaagtgaag
 780
 acctgggggtg gagtggtgac agctgccatg gtcatagccc tcgctgtcta catggggaca
 840
 ggcatctgtg gcttctgac ctttgagct gctgtggatc ctgac
 885

<210> 3508

<211> 199

<212> PRT

<213> Homo sapiens

<400> 3508

Leu	Arg	Thr	Leu	Leu	Asn	Leu	Leu	Phe	Leu	Pro	Asp	Gly	Leu	Cys	Gln
1			5					10						15	
Arg	Arg	Leu	Leu	Cys	Glu	Val	Ala	Ile	Ala	Val	Tyr	Thr	Phe	Gly	Thr
		20						25					30		
Cys	Ile	Ala	Phe	Leu	Ile	Ile	Ile	Gly	Asp	Gln	Gln	Asp	Lys	Ile	Ile
		35					40					45			
Ala	Val	Met	Ala	Lys	Glu	Pro	Glu	Gly	Ala	Ser	Gly	Pro	Trp	Tyr	Thr
	50					55					60				
Asp	Arg	Lys	Phe	Thr	Ile	Ser	Leu	Thr	Ala	Phe	Leu	Phe	Ile	Leu	Pro
65					70				75					80	
Leu	Ser	Ile	Pro	Arg	Glu	Ile	Gly	Phe	Gln	Lys	Tyr	Ala	Ser	Phe	Leu
			85					90					95		
Ser	Val	Val	Gly	Thr	Trp	Tyr	Val	Thr	Ala	Ile	Val	Ile	Ile	Lys	Tyr
		100					105					110			
Ile	Trp	Pro	Asp	Lys	Glu	Met	Thr	Pro	Gly	Asn	Ile	Leu	Thr	Arg	Pro
	115					120					125				
Ala	Ser	Trp	Met	Ala	Val	Phe	Asn	Ala	Met	Pro	Thr	Ile	Cys	Phe	Gly
	130				135						140				
Phe	Gln	Cys	His	Val	Ser	Val	Pro	Val	Phe	Asn	Ser	Met	Gln	Gln	
145				150					155				160		
Pro	Glu	Val	Lys	Thr	Trp	Gly	Gly	Val	Val	Thr	Ala	Ala	Met	Val	Ile

165 170 175
 Ala Leu Ala Val Tyr Met Gly Thr Gly Ile Cys Gly Phe Leu Thr Phe
 180 185 190
 Gly Ala Ala Val Asp Pro Asp
 195

<210> 3509
 <211> 331
 <212> DNA
 <213> Homo sapiens

<400> 3509
 ctagtgcacc ggaccatggc ccagccaccc gtccacgact acgtgcctgt ctcttgact
 60
 gccctggtgc atgtcaaggc cgagtacttc cgctccctgg ccactacca cgtagccatg
 120
 gccctctgcg acggctcccc gaccgagggg gagctcccca cgcacgagca ggtcttcctg
 180
 agccccccac ctctttaag ccccgaggg cctgggttgc cccagaagtt ggaggagcgc
 240
 aggcagcttg gtaaggcgcc catgggtgga gtgccttggg gtcagatgg tcaccaacgg
 300
 tggcagggtg tccccacca ccctcacgcg t
 331

<210> 3510
 <211> 110
 <212> PRT
 <213> Homo sapiens

<400> 3510
 Leu Val His Arg Thr Met Ala Gln Pro Pro Val His Asp Tyr Val Pro
 1 5 10 15
 Val Ser Trp Thr Ala Leu Val His Val Lys Ala Glu Tyr Phe Arg Ser
 20 25 30
 Leu Ala His Tyr His Val Ala Met Ala Leu Cys Asp Gly Ser Pro Thr
 35 40 45
 Glu Gly Glu Leu Pro Thr His Glu Gln Val Phe Leu Ser Pro Pro Pro
 50 55 60
 Pro Leu Ser Pro Arg Gly Pro Gly Leu Pro Gln Lys Leu Glu Glu Arg
 65 70 75 80
 Arg Gln Leu Gly Lys Ala Pro Met Gly Gly Val Pro Trp Gly Ser Asp
 85 90 95
 Gly His Gln Arg Trp Gln Gly Val Pro His His Pro His Ala
 100 105 110

<210> 3511
 <211> 3319
 <212> DNA
 <213> Homo sapiens

<400> 3511
 nngcgcgcca ggggcgcctc atgtgagagc cgcgggacct gcagccgccc cgcgtccccga
 60

agcacggggt ggtgtgtggg ggaagccgcc cccggcagca ggatgaaacg aggaggaaga
120
gatagtgacc gtaattcatc agaagaagga actgcagaga aatccaagaa actgaggact
180
acaaatgagc attctcagac ttgtgattgg ggtaatctcc ttcaggacat tattctccaa
240
gtatttaaatt atttgccctc tcttgaccgg gctcatgctt cacaagtttg ccgcaactgg
300
aaccaggtat ttcacatgcc tgacttgtgg agatgttttg aatttgaact gaatcagcca
360
gctacatctt atttgaaagc taccatcca gagctgatca aacagattat taaaagacat
420
tcaaaccatc tacaatatgt cagcttcaag gtggacagca gcaaggaatc agctgaagca
480
gcttgtgata tactatcgca acttgtgaat tgctctttaa aaacacttgg acttatttca
540
actgctcgac caagctttat ggatttacca aagtctcact ttatctctgc actgacagtt
600
gtgttcgtaa actccaaatc cctgtcttcg cttaagatag atgatactcc agtagatgat
660
ccatctctca aagtactagt ggccaacaat agtgatacac tcaagctgtt gaaaatgagc
720
agctgtcctc atgtctctcc agcaggtatc ctttgtgtgg ctgatcagtg tcacggctta
780
agagaactag ccctgaacta ccacttattg agtgatgagt tgttacttgc attgtcttct
840
gaaaaacatg ttcgattaga acatttgccg attgatgtag tcagtggagaa tcctggacag
900
acacacttcc atactattca gaagagtagc tgggatgctt tcatcagaca ttcacccaaa
960
gtgaacttag tgatgtattt ttttttatat gaagaagaat ttgaccctt ctttcgctat
1020
gaaatacctg ccacccatct gtactttggg agatcagtaa gcaaagatgt gcttggccgt
1080
gtgggaatga catgccctag actgggtgaa ctagtagtgt gtgcaaattg attacggcca
1140
cttgatgaag agttaattcg cattgcagaa cgttgcaaaa atttgtcagc tattggacta
1200
ggggaatgtg aagtctcatg tagtgccctt gttgagtttg tgaagatgtg tgggtggccgc
1260
ctatctcaat tatccattat ggaagaagta ctaattcctg accaaaagta tagtttggag
1320
cagattcact gggaagtgtc caagcatctt ggtagggtgt ggtttcccga catgatcccc
1380
acttggtaaa aactgcatga tgaatagcac cttaatttca agcaaattgta ttataattaa
1440
agttttattt gctgtagttc tgatataatt ctactatttt gtggcacaga aatttgatat
1500
cttcagtcag tatatgtaaa gattgtttat cggaagacct atgaatgagt tttggtcaga
1560
aaattccact tgtttcctta gtgtaatagc agtcatatct ccgaattttt tttaatgtgg
1620
ttcggatgtg aaataaccag ttatacgtat taaacagttt acagtctaaa ggaaacaaaa
1680

cctatatgtt ataatatcca agaagtacta atagggttttc tgaaatgtta tattctctat
1740
gcattaaaaa aaaaatgtaa acttgacatt ttaggggtctt cagttacaca tacacctgtt
1800
ataagggtgtt taatatagct caggaaagtg agcattttgt gagaaaaatg aatatatcat
1860
atctaattgga aaagattgga tgaatgttct caaatgttac aaagctgttt aaagaaaaag
1920
gtatatataa gtaatcagaa cacttagaag actgatagat gtcacacagt ggtattatag
1980
aaggataata cagagccaag atcaaattaa aagacaataa atggaacaga agggaggcag
2040
tgtttagctt tgtataaact tttagggttg ctctgtaatc tgctaaacca tatacattct
2100
tttgtgatat gttattatgt atgtggcact tgaggcactg tatgtaaagt aaggaatgct
2160
ttactagttc tccttggttt tatctttgtt taaactagct ttaaagtatt aaacaataat
2220
tgaaatgaaa agcttaccta ttttaaaaag ccaaatttaa ataaatatag aactttaaaa
2280
tgtttatcag ttgtttccat gaaagaatat tagtttccag taaattttag tgatggctca
2340
ctcacttttc tattttggaa ttacatagtt atgtaagtaa aattttttaa aatcataaag
2400
ggagcaccat tgtacagtct agcataaaca gcaaatttta aagaggacat atttaagttc
2460
ataatcatat ttttcagtaa atattgctca gtgaactgga aaactttaat agaaaaatgt
2520
ctgcagtttt gtgattgtta atttggttaa accgatattt tatattattt aagttaggta
2580
acattttata ttactttcat atgaataaaa gtaatccatg cattgtagag tctataaaat
2640
gttgagtttt tttagatgat ataaactttg attctgggca ctagtgctag tagatattac
2700
taccctcctg agggaaatca gaaatgattt aaccccagtg gaatacatta attcttaaag
2760
cggtctcttt cagtagtgtg acttttagaa agtgtctcag tagttaagga agctaacagt
2820
cttagatcta cttttaaaac ggatggcctt cttagaata aagcaaaagg tgattttcta
2880
cataattttt gctttccaaa agtgatgata tgctctccta cagcaacata tgagaagaaa
2940
aaaggcttat ctagattcga aaattaacag caattatagt aatatatccc ctcttcttaa
3000
atagtaaaaa gctctgattg tacaagaatt acctgtgcta gtcaagttgt tgtttttcct
3060
tgaacaactt tggaaaaatg gatttgacag tacataatca gttctactaa ccaaagcttg
3120
tatttggaat tttacttttt gtacaaattg aattatataa tgcttaaaat actttgtcac
3180
tttataagca aaatgcatag tacttaattt gtttatactg taaagtatat gttaaagtct
3240
tttatcactt tgagaataaa aagttactaa tgcaaaaaaa aaaaaaaaaa aaaaaaaaaa
3300

aaaaaaaaaa aaaaaaaaaa
3319

<210> 3512
<211> 462
<212> PRT
<213> Homo sapiens

<400> 3512
Xaa Arg Ala Arg Gly Ala Ser Cys Glu Ser Arg Gly Thr Cys Ser Arg
1 5 10 15
Arg Arg Pro Arg Ser Thr Gly Trp Cys Val Gly Glu Ala Ala Pro Gly
20 25 30
Ser Arg Met Lys Arg Gly Gly Arg Asp Ser Asp Arg Asn Ser Ser Glu
35 40 45
Glu Gly Thr Ala Glu Lys Ser Lys Lys Leu Arg Thr Thr Asn Glu His
50 55 60
Ser Gln Thr Cys Asp Trp Gly Asn Leu Leu Gln Asp Ile Ile Leu Gln
65 70 75 80
Val Phe Lys Tyr Leu Pro Leu Leu Asp Arg Ala His Ala Ser Gln Val
85 90 95
Cys Arg Asn Trp Asn Gln Val Phe His Met Pro Asp Leu Trp Arg Cys
100 105 110
Phe Glu Phe Glu Leu Asn Gln Pro Ala Thr Ser Tyr Leu Lys Ala Thr
115 120 125
His Pro Glu Leu Ile Lys Gln Ile Ile Lys Arg His Ser Asn His Leu
130 135 140
Gln Tyr Val Ser Phe Lys Val Asp Ser Ser Lys Glu Ser Ala Glu Ala
145 150 155 160
Ala Cys Asp Ile Leu Ser Gln Leu Val Asn Cys Ser Leu Lys Thr Leu
165 170 175
Gly Leu Ile Ser Thr Ala Arg Pro Ser Phe Met Asp Leu Pro Lys Ser
180 185 190
His Phe Ile Ser Ala Leu Thr Val Val Phe Val Asn Ser Lys Ser Leu
195 200 205
Ser Ser Leu Lys Ile Asp Asp Thr Pro Val Asp Asp Pro Ser Leu Lys
210 215 220
Val Leu Val Ala Asn Asn Ser Asp Thr Leu Lys Leu Leu Lys Met Ser
225 230 235 240
Ser Cys Pro His Val Ser Pro Ala Gly Ile Leu Cys Val Ala Asp Gln
245 250 255
Cys His Gly Leu Arg Glu Leu Ala Leu Asn Tyr His Leu Leu Ser Asp
260 265 270
Glu Leu Leu Leu Ala Leu Ser Ser Glu Lys His Val Arg Leu Glu His
275 280 285
Leu Arg Ile Asp Val Val Ser Glu Asn Pro Gly Gln Thr His Phe His
290 295 300
Thr Ile Gln Lys Ser Ser Trp Asp Ala Phe Ile Arg His Ser Pro Lys
305 310 315 320
Val Asn Leu Val Met Tyr Phe Phe Leu Tyr Glu Glu Glu Phe Asp Pro
325 330 335
Phe Phe Arg Tyr Glu Ile Pro Ala Thr His Leu Tyr Phe Gly Arg Ser
340 345 350
Val Ser Lys Asp Val Leu Gly Arg Val Gly Met Thr Cys Pro Arg Leu

	355		360		365										
Val	Glu	Leu	Val	Val	Cys	Ala	Asn	Gly	Leu	Arg	Pro	Leu	Asp	Glu	Glu
	370					375					380				
Leu	Ile	Arg	Ile	Ala	Glu	Arg	Cys	Lys	Asn	Leu	Ser	Ala	Ile	Gly	Leu
385					390					395				400	
Gly	Glu	Cys	Glu	Val	Ser	Cys	Ser	Ala	Phe	Val	Glu	Phe	Val	Lys	Met
			405					410						415	
Cys	Gly	Gly	Arg	Leu	Ser	Gln	Leu	Ser	Ile	Met	Glu	Glu	Val	Leu	Ile
			420					425					430		
Pro	Asp	Gln	Lys	Tyr	Ser	Leu	Glu	Gln	Ile	His	Trp	Glu	Val	Ser	Lys
	435						440					445			
His	Leu	Gly	Arg	Val	Trp	Phe	Pro	Asp	Met	Met	Pro	Thr	Trp		
450						455					460				

<210> 3513

<211> 2103

<212> DNA

<213> Homo sapiens

<400> 3513

tgaacctagg ggaatgtagt ctcattggga cttccaggat ccaagcctga cataatctcc
 60
 cagctggagc gaggggaaga tccctgggtc ctggacagga agggggctaa gaagagccag
 120
 ggctgtgga gtgactactc agaatatgaa cccaaggag agagtcaaaa tacagacttg
 180
 agtccgaagc cattaatttc agagcaaaca gtgattctgg ggaaaacacc cttggggagg
 240
 attgatcaag aaaataatga aacaaagcaa agcttctgtt tgagtccgaa ctctgttgac
 300
 caccgtgaag ttcaggctct aagccaaagc atgccactca ctccgcacca ggcagtgcct
 360
 agtggagaga ggccctacat gtgtgttgag tgtgggaagt gctttggccg gagttccac
 420
 ctcttcagc atcagcgtat ccacactgga gagaagccct atgtgtgcag tgtatgtggg
 480
 aaggccttca gccagagctc agtccttagt aaacacagga gaattcacac aggtgagaag
 540
 ccctatgagt gtaatgagtg tggaaaagcc tttagagtga gctcagatct tgctcagcat
 600
 cacaagatac atacaggaga gaagcctcac gaatgtcttg agtgtcggaa agccttcact
 660
 caactctcac atctcattca gcaccagcgg atccacacgg gagaaaggcc atatgtgtgt
 720
 ccgttgtgtg ggaaagcctt caaccatagc actgttctgc ggagccacca gaggttacac
 780
 actggggaga agcctcacag gtgcaatgag tgtgggaaaa ccttcagtgt gaagaggaca
 840
 ctgctgcagc accagaggat ccacaccggg gagaagccct acacgtgcag cgagtgtggg
 900
 aaggccttca gcgaccgctc agtcctcatt cagcaccaca acgtgcacac cggggagaag
 960
 ccctatgagt gcagtgagtg tgggaagacc ttcagccacc gctccacact gatgaatcac
 1020

gagcggatcc acaccgagga aaagccctat gcatgctacg aatgtgggaa ggccttcggt
 1080
 cagcactcac acctgatcca gcaccagaga gtccacactg gggagaagcc ctatgtgtgt
 1140
 ggtgaatgtg ggcacgcctt cagtgcacgc cggctctctga tccagcatga gagaatccac
 1200
 acaggtgaaa agcccttcca gtgcacagaa tgtggcaaag ctntcagcct gaaagcaact
 1260
 ctgattgtgc acctgaggac ccacacgggc gagaagccat atgagtgcaa tagctgctgg
 1320
 aaggccttca gccagtactc agtgctcatc cagcaccagc ggatccacac aggcgagaag
 1380
 ccctatgagt gcggggagtg tgggcgtgcc ttcaaccagc atggccacct aatccagcac
 1440
 cagaaagtgc acagaaagtt gtgacccatg gctgacacaa gaatccattc tcacagaaac
 1500
 tgcattgtga accacaagca gccttcagcc caagagaagt ctctgttaac tctataggaa
 1560
 gcttttcttt ggcgattcag tgtcacaaaa taactccaga aagaagcact tagcgtgctg
 1620
 ttcctgtgga aaaacttcag agactacctg ttttattttc ctcaacatct tgaagttatg
 1680
 ttggagagta atcatacaat tgtagagaat tttggtaaaa aacagccata attctttaac
 1740
 attagtttat ttgaactaag ggaatttaag gcataagaac cattatccca ataaaatctt
 1800
 acattccaaa taaagttctt tttctaagaa cattacatgc ccttcctaaa tatcaattaa
 1860
 ccatacta at tattgcactt aaaatttgaa agtcggacta ttttcagtat tctcttaaaa
 1920
 gactaaagta ttgtatggat aaagtgat at aaaaagatat tttcatcaag catcatgtaa
 1980
 aatggttgga aatcctaagt gtgtggattt ccacccaag tgtgtggagt cctgttttgt
 2040
 atgaaacaag gaaaaagctt atatattagt gagaaattac ataaatttaa aaaaaaaaaa
 2100
 aaa
 2103

<210> 3514

<211> 484

<212> PRT

<213> Homo sapiens

<400> 3514

Gly	Asn	Val	Val	Ser	Leu	Gly	Leu	Pro	Gly	Ser	Lys	Pro	Asp	Ile	Ile
1				5				10						15	
Ser	Gln	Leu	Glu	Arg	Gly	Glu	Asp	Pro	Trp	Val	Leu	Asp	Arg	Lys	Gly
			20					25					30		
Ala	Lys	Lys	Ser	Gln	Gly	Leu	Trp	Ser	Asp	Tyr	Ser	Glu	Tyr	Glu	Pro
		35					40					45			
Lys	Gly	Glu	Ser	Gln	Asn	Thr	Asp	Leu	Ser	Pro	Lys	Pro	Leu	Ile	Ser
	50					55					60				
Glu	Gln	Thr	Val	Ile	Leu	Gly	Lys	Thr	Pro	Leu	Gly	Arg	Ile	Asp	Gln

65					70					75					80
Glu	Asn	Asn	Glu	Thr	Lys	Gln	Ser	Phe	Cys	Leu	Ser	Pro	Asn	Ser	Val
				85					90					95	
Asp	His	Arg	Glu	Val	Gln	Val	Leu	Ser	Gln	Ser	Met	Pro	Leu	Thr	Pro
			100					105					110		
His	Gln	Ala	Val	Pro	Ser	Gly	Glu	Arg	Pro	Tyr	Met	Cys	Val	Glu	Cys
		115					120					125			
Gly	Lys	Cys	Phe	Gly	Arg	Ser	Ser	His	Leu	Leu	Gln	His	Gln	Arg	Ile
	130					135					140				
His	Thr	Gly	Glu	Lys	Pro	Tyr	Val	Cys	Ser	Val	Cys	Gly	Lys	Ala	Phe
145					150					155					160
Ser	Gln	Ser	Ser	Val	Leu	Ser	Lys	His	Arg	Arg	Ile	His	Thr	Gly	Glu
			165						170					175	
Lys	Pro	Tyr	Glu	Cys	Asn	Glu	Cys	Gly	Lys	Ala	Phe	Arg	Val	Ser	Ser
			180					185					190		
Asp	Leu	Ala	Gln	His	His	Lys	Ile	His	Thr	Gly	Glu	Lys	Pro	His	Glu
		195					200						205		
Cys	Leu	Glu	Cys	Arg	Lys	Ala	Phe	Thr	Gln	Leu	Ser	His	Leu	Ile	Gln
	210					215					220				
His	Gln	Arg	Ile	His	Thr	Gly	Glu	Arg	Pro	Tyr	Val	Cys	Pro	Leu	Cys
225					230					235				240	
Gly	Lys	Ala	Phe	Asn	His	Ser	Thr	Val	Leu	Arg	Ser	His	Gln	Arg	Val
			245						250					255	
His	Thr	Gly	Glu	Lys	Pro	His	Arg	Cys	Asn	Glu	Cys	Gly	Lys	Thr	Phe
		260						265					270		
Ser	Val	Lys	Arg	Thr	Leu	Leu	Gln	His	Gln	Arg	Ile	His	Thr	Gly	Glu
		275					280					285			
Lys	Pro	Tyr	Thr	Cys	Ser	Glu	Cys	Gly	Lys	Ala	Phe	Ser	Asp	Arg	Ser
	290					295				300					
Val	Leu	Ile	Gln	His	His	Asn	Val	His	Thr	Gly	Glu	Lys	Pro	Tyr	Glu
305					310					315					320
Cys	Ser	Glu	Cys	Gly	Lys	Thr	Phe	Ser	His	Arg	Ser	Thr	Leu	Met	Asn
			325						330					335	
His	Glu	Arg	Ile	His	Thr	Glu	Glu	Lys	Pro	Tyr	Ala	Cys	Tyr	Glu	Cys
		340					345					350			
Gly	Lys	Ala	Phe	Val	Gln	His	Ser	His	Leu	Ile	Gln	His	Gln	Arg	Val
	355						360				365				
His	Thr	Gly	Glu	Lys	Pro	Tyr	Val	Cys	Gly	Glu	Cys	Gly	His	Ala	Phe
	370				375					380					
Ser	Ala	Arg	Arg	Ser	Leu	Ile	Gln	His	Glu	Arg	Ile	His	Thr	Gly	Glu
385					390					395					400
Lys	Pro	Phe	Gln	Cys	Thr	Glu	Cys	Gly	Lys	Ala	Xaa	Ser	Leu	Lys	Ala
			405						410					415	
Thr	Leu	Ile	Val	His	Leu	Arg	Thr	His	Thr	Gly	Glu	Lys	Pro	Tyr	Glu
		420						425					430		
Cys	Asn	Ser	Cys	Gly	Lys	Ala	Phe	Ser	Gln	Tyr	Ser	Val	Leu	Ile	Gln
	435						440					445			
His	Gln	Arg	Ile	His	Thr	Gly	Glu	Lys	Pro	Tyr	Glu	Cys	Gly	Glu	Cys
	450					455				460					
Gly	Arg	Ala	Phe	Asn	Gln	His	Gly	His	Leu	Ile	Gln	His	Gln	Lys	Val
465					470					475					480
His	Arg	Lys	Leu												

<210> 3515
<211> 5003
<212> DNA
<213> Homo sapiens

<400> 3515
caacaattgg atattacatc aaccaagctg aataaccagt gtgagttgct aagccaactt
60
aaaggaaatt tagaagaaga aaatcggcat ctactagatc aaattcagac attaatgcta
120
cagaacagaa cactttttgga gcagaatatg gaaagcaagg atcttttttca tgttgaacaa
180
agacagtaca ttgataagtt aaatgaatta agacgtcaga aggagaaact agaagagaaa
240
attatggatc aatacaaatt ttatgaccca tctcctccta gaaggagagg caactggatt
300
actctaaaaa tgagaaaatt gataaagtct aagaaagata ttaatcggga acgccagaaa
360
tctctaacat taacacccac ccgctcagac tccagtgaag gattttcttca gctccctcat
420
caagacagtc aagatagttc ttcagtaggt tcaaactctt tagaagatgg ccagaccttg
480
gggaccaaga aaagcagcac catgaatgac ctggtgcagt ccatggctct agcaggacag
540
tggaacagga gtactgagaa tttggagggt cctgatgata tttcaacggg taaaaggaga
600
aaagaattgg gagctatggc cttctctact acagccatca acttttcaac tgtcaactct
660
tctgcaggct tcagatccaa gcagttgggt aataataaag atactacatc ctttgaagac
720
ataagtccac aagggtgtag tgatgattct agtacgggat caagagttca tgcttcaaga
780
ccagccagcc ttgatagtgg cagaacatcc actagcaata gcaataataa tgcttcaacta
840
catgaagtca aagcaggtgc agttaataac caaagcaggc caciaagcca cagcagtgga
900
gaatttagcc tgcttcatga ccatgagggt tgggtccagca gtggtagcag tccaatccag
960
tacttgaaaa gacagaccag atcaagccca gtgctccagc acaaaatatc tgaaacactg
1020
gagagtcgac atcacaagat caaaactggg tcccctggaa gtgaagttgt tactctacaa
1080
cagtttttgg aagaaagcaa taagcttacc tcagtacaga taaagtcctc aagtcaagag
1140
aatcttttag atgaagtaat gaaaagtttg tctgtctctt ctgacttttt gggaaaagac
1200
aaaccagtta gctgtggtct ggccagggtc gtaagtggaa aaaccccagg ggacttctat
1260
gatagacgga caactaagcc tgagtttttg agacctgggt ctcgaaaaac tgaagatacc
1320
tacttcatta gttctgcggg aaaacctaca ccaggcactc aaggaaaaat aaaattagta
1380
aaagaatctt ctctgtcacg acaatcaaaa gatagtaacc cttatgcaac tttacctcgt
1440

gcaagcagcg tgatctcaac tgccgaagga actacacgaa ggacaagcat ccatgatttt
1500
ttgaccaagg acagtagact gcctatatca gttgattcac caccagctgc tgctgacagc
1560
aacaccactg cagcatctaa tgtggacaaa gtacaagaaa gcagaaattc aaaaagcagg
1620
tctagggagc aacaaagctc ctaattctat taccactac atgacatgtg ggccaagtga
1680
gagaaaagtg tccttcagtt tctcagtatg aagcctttat ttctgaagta acaagacacc
1740
tagcaactat aggaatcatt tttaaaaatc ttttaaggaga cttttaacag tccttcgtga
1800
atagagcagg caagaaatac aaaccttcac tccttgaatc aaggagcact actggattca
1860
actgccaaaa ttttttaaag gttttaggac ttactatacc ttgtactgtt aagatctact
1920
gaataaagga cgttctctca ctaaggacca ggtgttttaa ggttaagtgt ttaaagaagt
1980
actccaagaa caatctgctt tttcatcat ttgttttatg aatttatcca tgtttgctta
2040
atgcttctgc taagtgttag ccaaaatcta gccatttata tttagttgtg taaacctaaa
2100
ttaaatgctg tagtattttg tggaatgtac tatatagcaa gatacagaga aaattgtttt
2160
ggcatgtcag agccttattt ggtagcaga ctgcatgtgt tgatactttt tttttcttaa
2220
agccaattat tttgatgcaa aagaaattca gtttataaga taaatctgaa aaatccataa
2280
tgaaatagga gttataaaaa atttatagtg atattaatct ttccatattt cccattaagc
2340
aacactaagc attcataagt taacctatgg taaagagtgt ttttctgaaa ctttttttta
2400
gtaagatggg ttttcagcaa atggcattcc caagataaag ctgttggtgt ttaactcatt
2460
tcttttctt ggtattgggt tatgtatgcg tgtgcatttt ttaacttga gagctgactg
2520
ttgcttaaga agttttctta tggcaaaaat aatgtaaata agttactatg atctgcattt
2580
tgccagaaac tcatttataa ttaaggctat catttattaa tgattttttt ctcctttatg
2640
atattacatt aaagttgata actgttattg gtacttttga aatatttgta tgtatttggt
2700
acctttaaac atttggaaga agcacaaaaa aatagattta gttaaccag ggaaacatca
2760
atttttttag tagttccaat tttatatcac agttttattt tcttatgaaa tcaaaaaatg
2820
cattgatact cattaatgca aattcattat ttaacatcaa tatcagagta atcttcaagg
2880
tctgaaatga gaaacatact gactttttta aattttaaca gtgtacttct taggctttca
2940
ttaccagctc tgaagaactt tttggaataa ttccatattc catagtgtgt ggtttatgag
3000
ttgtgggttt catcactaac ccagtaacca taagaaaagt ctctctctct ctctctctct
3060

ctttctctctt ccctctttct ctctctcttt cgtaggccag tagcaatgtt gtgttcacag
3120
tctaattttcc aaaagaccat caataaaaaa gagagcatgt ttaaattgaa atggaactta
3180
gagaacttga gcttacttac gtacttcaat gccaccggta acttaggttt taccaccaa
3240
tgctgttaac attaaatcat tttgaaaatc ttggatgaaa ggtgctatgt aaatggaaat
3300
acaaaggatt cttactaaca tacaaaaata atgcacaaca gaaatatcta aaaccttttc
3360
cgtagacttt gaaacatctc tctctgtcat aactccctgg attcaagtag cacattggta
3420
ataggatatca gagcagtcta gagacaattg catgtcaaaa aatgtacatt cttttttagg
3480
tggtataaaag taaacataga aattatgtta tggctaaata cagttagtgg gtaacttaga
3540
tttatattag ctagcatcta atttgcacaa ctagaacaca tcccagaaca attactgaaa
3600
agctgaaatt taatgggtgg tgatgtagcc caatgagggc gaatgacatt ccagcttgac
3660
ctctccagaa cactaatatc ctaaaataca gaacatgctg ggttaagtgc attagtgtt
3720
caagcagaaa atgctgaaaa caacgtgtaa agtactgaat ctgagtaggc tgaccctgag
3780
aagggacaat taaagagaca accaaggga cacattgaga ctacaaaaat atgaataatc
3840
tcaattatat tcatcacact tttttcatal catttcaaga aacgactaga cagtagtaac
3900
cacatgaata ttttactttc tccagtatac cttgagaagc aaactttgta ggaagccact
3960
cttctccctt aaacaacttc tgccaaacaa taataaagcc aactggaaac gaatcggagc
4020
cattttcatt ttcctaaccg gggcctgaca tgctttaaat tatctggctg tattctaaat
4080
caacacctaa cccctcaagg aaactgaaga atcaatatac agggtaatag ctttggotca
4140
gagctccaat aatgtgtctc agatctgtcc atgtggaaat gctttcatcc aaatttttaa
4200
attggtggtt accaaagagt tcacaaaaca ggtttgtatg tagcaccttt catgcaaggc
4260
atgcaaaaag cctattttta aatcactgtg catattatag agttgtagcc acctcacaat
4320
gaagtactac agcctgtgct gtcttaatgg tttatgtcag gaaatgaaaa agatactgta
4380
ccaaatctgg aattacaatg gggagtaata atgtatacta aatgactttt gtatttttaag
4440
ttactttttg tgagtgggtga atttttgtgt ttttcttttc agctacactt agtcctgaga
4500
tgtatttttt ctttaagtct tgaatgaata caaaaggagc ccattttata atataaacct
4560
tgatgtacat gttgagatat ttggacaatg aaaatgcctt aaaaggaatg catatggata
4620
aagttgcact tataacaccc ttcaacaaaa tctaatttta aattgtcttt ttcttttcta
4680

ttaaggggtt tctttttcag tgtctacccat tgtacttata actgtttatta aataccaaat
 4740
 caaataatat aaaagctgta acatttcctt taaaactaat gctaataagg gatttagagt
 4800
 tgaatggcaa aatgttttatt acttggcaat acctgatgtc agtcacaggc atccaactca
 4860
 tgacaagaga taccactggt tgttttttaa aaaacatttt tcattttggt tctccttcaa
 4920
 aaattaagtt ggactaacat tcacgtatca aactaatata aaaagaaata aaaccaagag
 4980
 gtgatttttg taaaaaaaaa aaa
 5003

<210> 3516
 <211> 547
 <212> PRT
 <213> Homo sapiens

<400> 3516
 Gln Gln Leu Asp Ile Thr Ser Thr Lys Leu Asn Asn Gln Cys Glu Leu
 1 5 10 15
 Leu Ser Gln Leu Lys Gly Asn Leu Glu Glu Asn Arg His Leu Leu
 20 25 30
 Asp Gln Ile Gln Thr Leu Met Leu Gln Asn Arg Thr Leu Leu Glu Gln
 35 40 45
 Asn Met Glu Ser Lys Asp Leu Phe His Val Glu Gln Arg Gln Tyr Ile
 50 55 60
 Asp Lys Leu Asn Glu Leu Arg Arg Gln Lys Glu Lys Leu Glu Glu Lys
 65 70 75 80
 Ile Met Asp Gln Tyr Lys Phe Tyr Asp Pro Ser Pro Pro Arg Arg Arg
 85 90 95
 Gly Asn Trp Ile Thr Leu Lys Met Arg Lys Leu Ile Lys Ser Lys Lys
 100 105 110
 Asp Ile Asn Arg Glu Arg Gln Lys Ser Leu Thr Leu Thr Pro Thr Arg
 115 120 125
 Ser Asp Ser Ser Glu Gly Phe Leu Gln Leu Pro His Gln Asp Ser Gln
 130 135 140
 Asp Ser Ser Ser Val Gly Ser Asn Ser Leu Glu Asp Gly Gln Thr Leu
 145 150 155 160
 Gly Thr Lys Lys Ser Ser Thr Met Asn Asp Leu Val Gln Ser Met Val
 165 170 175
 Leu Ala Gly Gln Trp Thr Gly Ser Thr Glu Asn Leu Glu Val Pro Asp
 180 185 190
 Asp Ile Ser Thr Gly Lys Arg Arg Lys Glu Leu Gly Ala Met Ala Phe
 195 200 205
 Ser Thr Thr Ala Ile Asn Phe Ser Thr Val Asn Ser Ser Ala Gly Phe
 210 215 220
 Arg Ser Lys Gln Leu Val Asn Asn Lys Asp Thr Thr Ser Phe Glu Asp
 225 230 235 240
 Ile Ser Pro Gln Gly Val Ser Asp Asp Ser Ser Thr Gly Ser Arg Val
 245 250 255
 His Ala Ser Arg Pro Ala Ser Leu Asp Ser Gly Arg Thr Ser Thr Ser
 260 265 270
 Asn Ser Asn Asn Asn Ala Ser Leu His Glu Val Lys Ala Gly Ala Val

	275		280		285	
Asn	Asn	Gln	Ser	Arg	Pro	Gln
290						295
Leu	His	Asp	His	Glu	Ala	Trp
305						310
Tyr	Leu	Lys	Arg	Gln	Thr	Arg
						315
Ser	Glu	Thr	Leu	Glu	Ser	Arg
						320
Gly	Ser	Glu	Val	Val	Thr	Leu
						325
Leu	Thr	Ser	Val	Gln	Ile	Lys
						330
Glu	Val	Met	Lys	Ser	Leu	Ser
385						335
Lys	Pro	Val	Ser	Cys	Gly	Leu
						340
Gly	Asp	Phe	Tyr	Asp	Arg	Arg
						345
Gly	Pro	Arg	Lys	Thr	Glu	Asp
						350
Pro	Thr	Pro	Gly	Thr	Gln	Gly
						355
Leu	Ser	Arg	Gln	Ser	Lys	Asp
465						360
Ala	Ser	Ser	Val	Ile	Ser	Thr
						365
Ile	His	Asp	Phe	Leu	Thr	Lys
						370
Ser	Pro	Pro	Ala	Ala	Ala	Asp
						375
Asp	Lys	Val	Gln	Glu	Ser	Arg
						380
Gln	Ser	Ser				
545						

<210> 3517

<211> 342

<212> DNA

<213> Homo sapiens

<400> 3517

acgcgtgtga tcgtccgtgc gtctagcctt tgcccacgca ggtatgaaca cccggagtgc
60acctggcggg aggacccct tcaggctgct ttggcccgat cctgacttta gtgctggccg
120cctttgcttt ccatecgcta tagtggcctc ctttgctcctt gcgggggaaa ccgaggccac
180agccttgtag cgcattgctg atcgcccgac ttcccgcccc ctgctcgtgc gggcctcact
240gtctccttct gggctggggg cttgcgacac cgccctccgg ccgactcgct cgtgggggtgc
300ctgttggcag tggctgggtc actcgtgctc tggtcaggga ga
342

<210> 3518
 <211> 99
 <212> PRT
 <213> Homo sapiens

<400> 3518

```

Met Asn Thr Arg Ser Ala Pro Gly Gly Arg Thr Pro Phe Arg Leu Leu
 1           5           10           15
Trp Pro Asp Pro Asp Phe Ser Ala Gly Arg Leu Cys Phe Pro Ser Ala
      20           25           30
Ile Val Ala Ser Phe Val Leu Ala Gly Glu Thr Glu Ala Thr Ala Leu
      35           40           45
Gln Arg Met Pro Asp Arg Pro Thr Ser Arg Pro Leu Leu Val Arg Ala
      50           55           60
Ser Leu Ser Pro Ser Gly Leu Gly Ala Cys Asp Thr Ala Leu Arg Pro
65           70           75           80
Thr Arg Ser Trp Gly Ala Cys Trp Gln Trp Leu Gly His Ser Cys Ser
      85           90           95
Gly Gln Gly
  
```

<210> 3519
 <211> 2207
 <212> DNA
 <213> Homo sapiens

<400> 3519

```

ccacagccca gcccccgggc ccagccccct ggtggcaccc cggcagacgc cgggccaggc
60
cagggcagct cagaagaaaa accaaaactg ggggttggtg tgaacctgcc acctgcccag
120
ctgtcgtcca gcgatgagga gaccagggag gagctggccc gaattggggtt ggtgccaccc
180
cctgaagagt ttgccaacgg ggtcctgctg gccaccccac tcgctggccc gggcccctcg
240
cccaccacgg tgcccagccc ggcctcaggg aagcccagca gtgagccacc ccctgcccct
300
gagtctgcag ccgactctgg ggtggaggag gctgacacac gcagctccag cgacccccac
360
ctggagacca caagcaccat ctccacggtg tccagcatgt ccaccttgag ctcggagagc
420
ggggaactca ctgacaccca cacctccttc gctgacggac acacttttct actcgagaag
480
ccaccagtgc ctcccaagcc caagctcaag tccccgctgg ggaagggggc ggtgaccttc
540
agggacccgc tgctgaagca gtcctcggac agcgagctca tggcccagca gcaccacgcc
600
gcctctgccg ggctggcctc tgccgcgggg cctgcccgcc ctcgctacct cttccagaga
660
aggtccaagc tatgggggga ccccgaggag agccgggggc tccctggggc tgaagacgac
720
aaaccaactg tgatcagtga gctcagctcc cgctgcagc agctgaacaa ggacacgcgt
780
  
```


tccctggggg aggaaccagt tgggtggcctg ggcagcctgc tggaccctgc caagaagtcg
840
cccacgcag cagctcggtc tccccctctcc tctttgggtc tgggggggtg gtatgtggat
900
gccacctctt gactcctgct tcttgctgcc tggaagacca acctagtggg ccccgctactg
960
tcagccttgg aggacagagt tcacagcgta gcaacgtgtt cagaacttaa ggactttgca
1020
ggtcttataa aggcttggtc attctacctt ctttagttca ggattcaaaa gacaggtagg
1080
agcttgggaa actcatgagg cctctcctaa ggtcccgga tgctgcctcc agctcctgtc
1140
atcctgggga attgctctgg ggtcctctcc ccttttagcc ttttccaact ctcagccaaa
1200
ctggaaagcc ctcttcccag cagtgcagtg ttgaagggtg ccgtagaatg ggtgttataa
1260
tcagagttag cagcctggtc ctaggcctct gtacaggacc agaccctga ggctggggtc
1320
tctgaccca cacctgacca gccccatct tccctctctg cttctccctc cgctcttctc
1380
tgcctcttgg tcttgatgaa aatcaaagcc attttaaaaa gtgcatagca cagtgcctgg
1440
cctgggttcg gccctcaata aacatttctt aaatggatga aagaacaaag caaatgcaa
1500
atgctgtgtt ttgtgatttg agatctaggg aggtggctta ggacaaaaac ccacagaagg
1560
acttactcag cgttcagact catcaggtgt cgatcccca tggctgggct caggtgggct
1620
caggtctcgt cattggctct gtcctctct gtgaggcagc tgcagcagtt gcagggcagg
1680
gtcaggggat tctcagccg gaacctctgg cacttcccct tctctgagtt catcctcca
1740
cggtgctctt tagcattctg tcttgatcag ggtacgggtc tcttagccct tggctctggc
1800
tttcaccagg accctgttg ttttctttc tcagatgtgg gatggggaag gacaagacca
1860
gcagccctga ccctacgtg atgtctgttc ttttactcag tagttcctgc aaaattctga
1920
tctctgattg ggttcatgtg ggtcctctgc ttttccctga ctgatcactg gggctctggg
1980
acatagggct gtcacggcc aagcttgagt cctctgttct cccaggagcc agggggatgg
2040
gtccgcccac ctagcaagca ggtgctgaga ttgaggggag ggggctctcc agatggaagt
2100
ccagtgtgt cccttgagta agtagatgct ggacagcctg tagcaaccaa tgttctgtga
2160
cacggcccc actggcatca gcaactcact tccctgccg tcattgg
2207

<210> 3520

<211> 303

<212> PRT

<213> Homo sapiens

<400> 3520
 Pro Gln Pro Ser Pro Arg Ala Gln Pro Pro Gly Gly Thr Pro Ala Asp
 1 5 10 15
 Ala Gly Pro Gly Gln Gly Ser Ser Glu Glu Lys Pro Lys Leu Gly Leu
 20 25 30
 Val Val Asn Leu Pro Pro Ala Gln Leu Ser Ser Ser Asp Glu Glu Thr
 35 40 45
 Arg Glu Glu Leu Ala Arg Ile Gly Leu Val Pro Pro Pro Glu Glu Phe
 50 55 60
 Ala Asn Gly Val Leu Leu Ala Thr Pro Leu Ala Gly Pro Gly Pro Ser
 65 70 75 80
 Pro Thr Thr Val Pro Ser Pro Ala Ser Gly Lys Pro Ser Ser Glu Pro
 85 90 95
 Pro Pro Ala Pro Glu Ser Ala Ala Asp Ser Gly Val Glu Glu Ala Asp
 100 105 110
 Thr Arg Ser Ser Ser Asp Pro His Leu Glu Thr Thr Ser Thr Ile Ser
 115 120 125
 Thr Val Ser Ser Met Ser Thr Leu Ser Ser Glu Ser Gly Glu Leu Thr
 130 135 140
 Asp Thr His Thr Ser Phe Ala Asp Gly His Thr Phe Leu Leu Glu Lys
 145 150 155 160
 Pro Pro Val Pro Pro Lys Pro Lys Leu Lys Ser Pro Leu Gly Lys Gly
 165 170 175
 Pro Val Thr Phe Arg Asp Pro Leu Leu Lys Gln Ser Ser Asp Ser Glu
 180 185 190
 Leu Met Ala Gln Gln His His Ala Ala Ser Ala Gly Leu Ala Ser Ala
 195 200 205
 Ala Gly Pro Ala Arg Pro Arg Tyr Leu Phe Gln Arg Arg Ser Lys Leu
 210 215 220
 Trp Gly Asp Pro Val Glu Ser Arg Gly Leu Pro Gly Pro Glu Asp Asp
 225 230 235 240
 Lys Pro Thr Val Ile Ser Glu Leu Ser Ser Arg Leu Gln Gln Leu Asn
 245 250 255
 Lys Asp Thr Arg Ser Leu Gly Glu Glu Pro Val Gly Gly Leu Gly Ser
 260 265 270
 Leu Leu Asp Pro Ala Lys Lys Ser Pro Ile Ala Ala Ala Arg Ser Pro
 275 280 285
 Leu Ser Ser Leu Gly Leu Gly Trp Tyr Val Asp Ala Thr Ser
 290 295 300

<210> 3521
 <211> 638
 <212> DNA
 <213> Homo sapiens

<400> 3521
 caacgtcaac aagcaccg ggcggccggca gaaggcccgt atcctgcagg ccggcacgccc
 60
 gctgggggctc atggcctacc tgtactccag tgatgccttc ctggagggtt atgtgcagca
 120
 attcctctac accttccgct acttctgcac accccaagac ttctctgact tcctcctcga
 180
 ccgcatcaac agcacgctga ccagggccca ccaggacccc acctcgacct tcaccaagat
 240

ctacaggcgg agcctctgcg tcctgcaggc ctgggtggag gactgctacg ctgtggactt
 300
 ccctcggaac agcgggctgc tggggaagct agaggacttc atctcctcca agatcctacc
 360
 cctggacggc tctgccaagc acctgctggg cctcctggag gtgggcatgg accggcgggc
 420
 cgagggcaac cctcgcgga cagacctgga gaaccccagg gaggccgagg aggantgcca
 480
 gacccttcaa cgccctctgt aagaggctct cagaggacgg catctccagg aagagcttcc
 540
 cctggaggct gccccgaggc aacgggctgg tgctgccgcc acacaaggag cgcccctaca
 600
 ccattgctgc cgccctgccc aagccctgct tcctcgag
 638

<210> 3522

<211> 181

<212> PRT

<213> Homo sapiens

<400> 3522

Cys	Leu	Pro	Gly	Gly	Leu	Cys	Ala	Ala	Ile	Pro	Leu	His	Leu	Pro	Leu
1			5						10				15		
Leu	Leu	His	Thr	Pro	Arg	Leu	Pro	Ala	Leu	Pro	Pro	Arg	Pro	His	Gln
		20						25				30			
Gln	His	Ala	Asp	Gln	Gly	Pro	Pro	Gly	Pro	His	Leu	Asp	Leu	His	Gln
		35				40					45				
Asp	Leu	Gln	Ala	Glu	Pro	Leu	Arg	Pro	Ala	Gly	Leu	Gly	Gly	Gly	Leu
50						55					60				
Leu	Arg	Cys	Gly	Leu	Pro	Ser	Glu	Gln	Arg	Ala	Ala	Gly	Glu	Ala	Arg
65				70					75					80	
Gly	Leu	His	Leu	Leu	Gln	Asp	Pro	Thr	Pro	Gly	Arg	Leu	Cys	Gln	Ala
			85						90					95	
Pro	Ala	Gly	Pro	Pro	Gly	Gly	Gly	His	Gly	Pro	Ala	Gly	Arg	Gly	Gln
			100					105					110		
Pro	Ser	Arg	His	Arg	Pro	Gly	Glu	Pro	Gln	Gly	Gly	Arg	Gly	Gly	Xaa
		115				120						125			
Pro	Asp	Pro	Ser	Thr	Pro	Ser	Val	Arg	Gly	Ser	Gln	Arg	Thr	Ala	Ser
	130					135						140			
Pro	Gly	Arg	Ala	Ser	Pro	Gly	Gly	Cys	Pro	Glu	Ala	Thr	Gly	Trp	Cys
145				150						155				160	
Cys	Arg	His	Thr	Arg	Ser	Ala	Pro	Thr	Pro	Leu	Leu	Pro	Pro	Cys	Pro
			165					170						175	
Ser	Pro	Ala	Ser	Ser											
			180												

<210> 3523

<211> 2614

<212> DNA

<213> Homo sapiens

<400> 3523

nnactcctgg cagcccgcgg cccccgagca cgcgcctgac agcccctgct ggcccggcgc
 60

gcggcgctgc caggccagct catggccccc gaccggttg ccgccgagac cgcggctcag
120
ggacttaccc cgcgctactt cacctgggac gaggtggccc agcgctcagg gtgcgaggag
180
cggtggctag tgatcgaccg taaggtgtac aacatcagcg acttcagtcg ccggcatcca
240
gggggctccc gggatcatcag ccactacgcc gggcaggatg ccacggatcc ctttgtggcc
300
ttccacatca acaagggcct tgtgaagaag tatatgaact ctctcctgat tggagaactg
360
tctccagagc agcccagctt tgagcccacc aagaataaag agctgacaga tgagttccgg
420
gagctgcggg ccacagtgga gcggatgggg ctcatgaagg ccaaccatgt cttcttctg
480
ctgtacctgc tgcacatctt gctgctggat ggtgcagcct ggctcaccct ttgggtcttt
540
gggacgtcct ttttgccctt cctcctctgt gcggtgctgc tcagtgcagt tcaggcccag
600
gctggtggc tgcagcatga ctttgggcac ctgtcggtct tcagcacctc aaagtggaaac
660
catctgctac atcattttgt gattggccac ctgaaggggg ccccgccag ttggtggaaac
720
cacatgcact tccagcacca tgccaagccc aactgcttcc gcaaagaccc agacatcaac
780
atgcattcct tcttctttgc cttggggaag atcctctctg tggagcttgg gaaacagaag
840
aaaaaatata tgccgtacaa ccaccagcac aaatacttct tcctaattgg gccccagcc
900
ttgctgcctc tctacttcca gtggtatatt ttctattttg ttatccagcg aaagaagtgg
960
gtggacttgg tctggatgat taccttctac gtccgcttct tctcactta tgtgccacta
1020
ttggggctga aagccttctt gggccttttc ttcatagtca ggttcctgga aagcaactgg
1080
tttgtgtggg tgacacagat gaaccatatt cccatgcaca ttgatcatga ccggaacatg
1140
gactgggttt ccaccagct ccaggccaca tgcaatgtcc acaagtctgc cttcaatgac
1200
tggttcagtg gacacctcaa cttccagatt gagcaccatc tttttccac gatgcctcga
1260
cacaattacc acaaagtggc tcccctggtg cagtccttgt gtgccaagca tggcatagag
1320
taccagtcca agcccctgct gtcagccttc gccgacatca tccactcact aaaggagtca
1380
gggcagctct ggctagatgc ctatcttcac caataacaac agccaccctg ccagctctgg
1440
aagaagagga ggaagactct ggagccaagg cagaggggag cttgagggac aatgccacta
1500
tagtttaata ctgagagggg gttgggtttg gggacataaa gcctctgact caaactcctc
1560
ccttttatct tctagccaca gttctaagac ccaaagtggg ggggtggacac agaagtccct
1620
aggaggggaag gagctgttgg ggcaggggtg taaattattt cctttttcta gtttggcaca
1680

tgcaggtagt tggatgaacag agagaaccag gagggtaaca gaagaggagg gacctactga
 1740
 acccagagtc aggaagagat ttaacactaa aattccactc atgccggggcg tggatggcacg
 1800
 cgctgtaat cccagctacc caggaggctg aggcaggaga atcgcttgaa ccggggagggt
 1860
 ggaggttgca gtgagctgag atcaegccat tgtactccag cctggggcgac agagcctcca
 1920
 tctccaaagg aaaaacaaaa gggtattctg tattgtaatt taaaaataaa atttcttcta
 1980
 tttgaatttt taaagttaaa aacgtaagta aatcctgtca ttgctaacag ggccacatat
 2040
 ggactcttac tctttcctct agacccccag agtgtagaat gtgatacact tttgtccttt
 2100
 tctctgagga tgtgctgcct agtgtcgtgg aatctgcctg accattgcaa gcatccaatt
 2160
 ttgtgaccag ttcttttgca ggaaattggt tctgagaaga ctggaagaca agaaatatcc
 2220
 cactcttctt aacaagatct gaattgttcg aaaagcagcc agtgcctaac ttgtagctcc
 2280
 acttatgcca actgtatata tacctctcgt gagcatagca agtgatttaa tattttgaaa
 2340
 agatggctaa aatcctttta atgaacagca ctaaagttat atgtattaga ggagaattat
 2400
 tgaatgagat ggagaaagag ttctgaaatt aatatttaca ttttggcttt tttacagata
 2460
 atattatatt tctgagtgcac cagacgaaag agaaggagta gaaaggatga ttcttctttg
 2520
 gccatcattt ggtacagtct catttccaag tcatgtataa tctttatggc ttccaaggac
 2580
 aagaattaaa atactctttt acgtaaaaaa aata
 2614

<210> 3524

<211> 444

<212> PRT

<213> Homo sapiens

<400> 3524

Met	Ala	Pro	Asp	Pro	Leu	Ala	Ala	Glu	Thr	Ala	Ala	Gln	Gly	Leu	Thr
1				5				10					15		
Pro	Arg	Tyr	Phe	Thr	Trp	Asp	Glu	Val	Ala	Gln	Arg	Ser	Gly	Cys	Glu
			20				25						30		
Glu	Arg	Trp	Leu	Val	Ile	Asp	Arg	Lys	Val	Tyr	Asn	Ile	Ser	Asp	Phe
			35				40						45		
Ser	Arg	Arg	His	Pro	Gly	Gly	Ser	Arg	Val	Ile	Ser	His	Tyr	Ala	Gly
			50				55					60			
Gln	Asp	Ala	Thr	Asp	Pro	Phe	Val	Ala	Phe	His	Ile	Asn	Lys	Gly	Leu
						70				75				80	
Val	Lys	Lys	Tyr	Met	Asn	Ser	Leu	Leu	Ile	Gly	Glu	Leu	Ser	Pro	Glu
					85				90					95	
Gln	Pro	Ser	Phe	Glu	Pro	Thr	Lys	Asn	Lys	Glu	Leu	Thr	Asp	Glu	Phe
			100					105					110		
Arg	Glu	Leu	Arg	Ala	Thr	Val	Glu	Arg	Met	Gly	Leu	Met	Lys	Ala	Asn

115 120 125
 His Val Phe Phe Leu Leu Tyr Leu Leu His Ile Leu Leu Leu Asp Gly
 130 135 140
 Ala Ala Trp Leu Thr Leu Trp Val Phe Gly Thr Ser Phe Leu Pro Phe
 145 150 155 160
 Leu Leu Cys Ala Val Leu Leu Ser Ala Val Gln Ala Gln Ala Gly Trp
 165 170 175
 Leu Gln His Asp Phe Gly His Leu Ser Val Phe Ser Thr Ser Lys Trp
 180 185 190
 Asn His Leu Leu His His Phe Val Ile Gly His Leu Lys Gly Ala Pro
 195 200 205
 Ala Ser Trp Trp Asn His Met His Phe Gln His His Ala Lys Pro Asn
 210 215 220
 Cys Phe Arg Lys Asp Pro Asp Ile Asn Met His Pro Phe Phe Phe Ala
 225 230 235 240
 Leu Gly Lys Ile Leu Ser Val Glu Leu Gly Lys Gln Lys Lys Lys Tyr
 245 250 255
 Met Pro Tyr Asn His Gln His Lys Tyr Phe Phe Leu Ile Gly Pro Pro
 260 265 270
 Ala Leu Leu Pro Leu Tyr Phe Gln Trp Tyr Ile Phe Tyr Phe Val Ile
 275 280 285
 Gln Arg Lys Lys Trp Val Asp Leu Val Trp Met Ile Thr Phe Tyr Val
 290 295 300
 Arg Phe Phe Leu Thr Tyr Val Pro Leu Leu Gly Leu Lys Ala Phe Leu
 305 310 315 320
 Gly Leu Phe Phe Ile Val Arg Phe Leu Glu Ser Asn Trp Phe Val Trp
 325 330 335
 Val Thr Gln Met Asn His Ile Pro Met His Ile Asp His Asp Arg Asn
 340 345 350
 Met Asp Trp Val Ser Thr Gln Leu Gln Ala Thr Cys Asn Val His Lys
 355 360 365
 Ser Ala Phe Asn Asp Trp Phe Ser Gly His Leu Asn Phe Gln Ile Glu
 370 375 380
 His His Leu Phe Pro Thr Met Pro Arg His Asn Tyr His Lys Val Ala
 385 390 395 400
 Pro Leu Val Gln Ser Leu Cys Ala Lys His Gly Ile Glu Tyr Gln Ser
 405 410 415
 Lys Pro Leu Leu Ser Ala Phe Ala Asp Ile Ile His Ser Leu Lys Glu
 420 425 430
 Ser Gly Gln Leu Trp Leu Asp Ala Tyr Leu His Gln
 435 440

<210> 3525
 <211> 1116
 <212> DNA
 <213> Homo sapiens

<400> 3525
 nnaaaaagcc acagaaaatg aacatccctt cagaatgggt ttgaagagct gatccagtgg
 60
 attaaagagg ggaaactggg agtttccaat taacaatgaa gcaggagctg actaaggctt
 120
 tggaacagaa accagatgat gcacaatatt attgtcaaag agcttattgt cacattcttc
 180

ttgggagtta ctatggatct gtaaataact gacgaaaaac gcaccttttt ctacatagtt
 240
 gctgttgctg atgcaaagaa gtctcgcgaa ttcaatccaa ataattccac tgctgtgctg
 300
 agaaaagga tatgtgaata ccatttaaaa aactatgctg ctgctctaga aacttttata
 360
 ggaggacaaa aattangtgc agatgcta attcagtgcact ggattaaaag gtgtcaagaa
 420
 gctcagaatg gctcagaatc tgagggtggtg atggaaccag ccctggaagg cacaggcaaa
 480
 gaggggaaga aagcatcctc caggaagcgt acattggctg aacctccagc gaagggcctc
 540
 ctgcagccag tgaagctcag cagggcagaa ctgtacaagg agcctacca tgaaggagctt
 600
 aatgccttc gggagactga gatcttgctc cactccagct tgcttcgctt acaggtagag
 660
 gagctactaa aggaagtaag gctgtcagag aagaagaagg atcggattga tgccttccta
 720
 cgggaggtca accagcgggt tgtgagggtg ccctcagtc ctgagacaga gtcactgac
 780
 caggcatggc tcccagctgg ggttcgagtg ccctccacc aagtgccta tgccgtgaag
 840
 ggctgtttcc gcttctgccc ccagcccag gttactgttg tgggcagcta ccttctgggc
 900
 acctgcatcc gaccagacat caatgtggat gtggcactga ccatgcccag ggaaatccta
 960
 caggacaagg acgggctgaa ccagcgctac ttccgcaagc gtgcccctcta cctggcccac
 1020
 ttggctcacc acctggccca ggacccctc ttgggcagtg tttgcttctc ctacacaaat
 1080
 ggctgccacc tgaaaccctc attgttgctc cggccg
 1116

<210> 3526

<211> 304

<212> PRT

<213> Homo sapiens

<400> 3526

Ile	Thr	Asp	Glu	Lys	Arg	Ile	Phe	Phe	Tyr	Ile	Val	Ala	Val	Ala	Asp
1				5					10					15	
Ala	Lys	Lys	Ser	Arg	Glu	Phe	Asn	Pro	Asn	Asn	Ser	Thr	Ala	Val	Leu
			20				25					30			
Arg	Lys	Gly	Ile	Cys	Glu	Tyr	His	Leu	Lys	Asn	Tyr	Ala	Ala	Ala	Leu
		35				40					45				
Glu	Thr	Phe	Ile	Gly	Gly	Gln	Lys	Leu	Xaa	Ala	Asp	Ala	Asn	Phe	Ser
	50					55					60				
Asp	Trp	Ile	Lys	Arg	Cys	Gln	Glu	Ala	Gln	Asn	Gly	Ser	Glu	Ser	Glu
65					70					75				80	
Val	Val	Met	Glu	Pro	Ala	Leu	Glu	Gly	Thr	Gly	Lys	Glu	Gly	Lys	Lys
				85				90						95	
Ala	Ser	Ser	Arg	Lys	Arg	Thr	Leu	Ala	Glu	Pro	Pro	Ala	Lys	Gly	Leu
			100				105						110		
Leu	Gln	Pro	Val	Lys	Leu	Ser	Arg	Ala	Glu	Leu	Tyr	Lys	Glu	Pro	Thr

115	120	125
Asn Glu Glu Leu Asn Arg Leu Arg Glu Thr Glu Ile Leu Phe His Ser		
130	135	140
Ser Leu Leu Arg Leu Gln Val Glu Glu Leu Leu Lys Glu Val Arg Leu		
145	150	155
Ser Glu Lys Lys Lys Asp Arg Ile Asp Ala Phe Leu Arg Glu Val Asn		
165	170	175
Gln Arg Val Val Arg Val Pro Ser Val Pro Glu Thr Glu Leu Thr Asp		
180	185	190
Gln Ala Trp Leu Pro Ala Gly Val Arg Val Pro Leu His Gln Val Pro		
195	200	205
Tyr Ala Val Lys Gly Cys Phe Arg Phe Leu Pro Pro Ala Gln Val Thr		
210	215	220
Val Val Gly Ser Tyr Leu Leu Gly Thr Cys Ile Arg Pro Asp Ile Asn		
225	230	235
Val Asp Val Ala Leu Thr Met Pro Arg Glu Ile Leu Gln Asp Lys Asp		
245	250	255
Gly Leu Asn Gln Arg Tyr Phe Arg Lys Arg Ala Leu Tyr Leu Ala His		
260	265	270
Leu Ala His His Leu Ala Gln Asp Pro Leu Phe Gly Ser Val Cys Phe		
275	280	285
Ser Tyr Thr Asn Gly Cys His Leu Lys Pro Ser Leu Leu Leu Arg Pro		
290	295	300

<210> 3527
 <211> 2838
 <212> DNA
 <213> Homo sapiens

<400> 3527
 cagggattga aggtccgagg gtgagtgggc tgggcatgag ggctgtgggg cggggcggtg
 60
 ggcgggcacc ctgcattctc ctcccgggtg tacattctct ccctccggac ctccgtcatc
 120
 ccgtctgtgc cagaggaacc attgtccctg ggtcccaggt ctgcttgagg agggactggg
 180
 ttggggagag atgaagaccc tgtggaccag ggctcactct tcttctcttg tccccaggg
 240
 ggtcctcccg gccccagagg gcggcccggc cccccgggtc ctccaggggg tcctatccaa
 300
 ttgcaacaag atgatcttgg ggcagctttc cagacgtgga tggacaccag tggagcactc
 360
 aggccagaga gttacagcta tccagaccgg ctggtgctgg accagggagg agagatcttt
 420
 aaaccttac actacctcag caacctcatc cagagcatta agacgccctt gggcaccaaa
 480
 gagaaccccg cccgggtctg cagggaacctc atggactgtg agcagaagat ggtggatggt
 540
 acctactggg tggatccaaa ccttggtctg tcctctgaca ccatcgaggt ctcttgcaac
 600
 ttcactcatg gtggacagac gtgtctcaag cccatcacgg cctccaaggt cgagtttgcc
 660
 atcagccggg tccagatgaa tttctgcac ctgctaagct ccgaggtgac ccagcacatc
 720

accatccact gccttaacat gaccgtgtgg caggagggca ctgggcagac cccagccaag
780
caggccgtac gcttccgggc ctggaatgga cagatTTTTg aagctggggg tcagtTccgg
840
cccaggtgt ccatggatgg ctgcaaggTC caagatggcc gctggcatca gacactcttc
900
accttccgga cccaagaccc ccaacagctg cccatcatca gtgtggacaa cctccctcct
960
gcctcatcag ggaagcagta ccgcttgga gttggacctg cgtgcttctt ctgacctctg
1020
acctcgtggc cactctaggc ctcatggagg agggaagagg aagaggcaag gggaggggtac
1080
tgaggggcag atggctccag gagaggcagc tccctgccc aagggtcctt gggcagaccc
1140
cagctgttgt ctgcccagta gaagtgggtg ggggtaggag gggatagggt gtccttgga
1200
acaatggatc ccagcttagc cccaaagacc aaccaaagag ccagccagag taagctggac
1260
ctgcaacctg cctgagcccc gtggcctctc agctctgcgg ccaccccggt cctccccag
1320
cttcctgccc aaagagcccc acattcaagc caacttgagg gaagggggcg tctcgtcagc
1380
tggtccctgc tagggagcta ttgatgtgca atattagaaa ggagacatga aaaaaggaga
1440
aaaggaaaga cagaagtgtat tatatatatt atttaaaca aaaaaagaa ggtgcgttac
1500
tattttttt tccccggga aagaggtgag aggatgggaa ggagcagcca ggcgtgggaa
1560
gcggcgagat cctcgggctg ggggtgccc cgtttgctac ctccactgt gaaatcgctg
1620
gtgctcacia ttgtctctca cagtgtatgt gattttttta aggaaaaaaa aaaatcccta
1680
tttaagattc tgaaggtgct accattattt tgccacagac tttgaagaaa cttttggatg
1740
tggggcatca tccgcatctt tctctctcct ccaaagaca aagtttgggg aatttttgaa
1800
ttttcctagc atcgcccttg tgctcatcag gtaatctgct aaggaggaaa aaagaaaaga
1860
aaaaaggaaa aaaaaaaaaa aaagcaaac aaaaacaaaa aaaaaaacc taccagaaac
1920
cagaagtaga gagatttacc atataactta tggactttga aatgtctgtc cttttaaggc
1980
agcaggagg cctgggtgag aacatgttgg cttggccttc acggtcctgg agggaggtga
2040
ggctggcctt ggaaggcgtg ccctggagag gtcttgggtg aaaacttgac cttgaagaaa
2100
ccaatcacia aagcggcggt gggtcagggc taggcttaga ggtgaagcat caacatggaa
2160
ccatctcagg aagccgcac gcctcttccg aggtcctcac ttccaggagc ctgtccttgc
2220
aagatgcaat catcgcttct gctttttcat tgtcattaaa ttctgtagaa acccattgtc
2280
attagctcca agtgtaaatt tgggtcaagg agacagaata ataatgggaa tctcggagtt
2340

cgacaccata gtgacgttca gcgtcctctg aattgtgcta catcagcgaa caagtcggcg
2400
cttgaattgg attttgaggt tattttaacc atggaattat ttttatagaa ggggaaaatg
2460
tatgtgaaag tctctatttg tgtatttctc tcctaaagtt gtgtctcttt gggaattgga
2520
tttgattttt attatttaac acctcacttt ggcccgtccc cctcccacac acttctgtat
2580
cctcgccctg ccgccccagc ctggacgctc tgcgtggaag tgcgtgtttg tagcagctcg
2640
ggcctcatct cagcgctcgg atccctcctg ctgccagaat ccaactggcct ctgtctcatt
2700
cttgggtttt cctgctgtct tcgtttacgt ctctgtccac atgtcagtgt attaaaaccc
2760
caatgggttc cgtttctcct tttccctctt ggattttaaa taaatattta aaactgaggc
2820
aatggaaaaa aaaaaaaaaa
2838

<210> 3528

<211> 281

<212> PRT

<213> Homo sapiens

<400> 3528

Gly	Gly	Thr	Gly	Leu	Gly	Arg	Asp	Glu	Asp	Pro	Val	Asp	Gln	Gly	Ser
1				5					10					15	
Leu	Phe	Phe	Ser	Cys	Ser	Pro	Arg	Gly	Pro	Pro	Gly	Pro	Arg	Gly	Arg
			20					25					30		
Pro	Gly	Pro	Pro	Gly	Pro	Pro	Gly	Gly	Pro	Ile	Gln	Leu	Gln	Gln	Asp
			35				40					45			
Asp	Leu	Gly	Ala	Ala	Phe	Gln	Thr	Trp	Met	Asp	Thr	Ser	Gly	Ala	Leu
			50			55					60				
Arg	Pro	Glu	Ser	Tyr	Ser	Tyr	Pro	Asp	Arg	Leu	Val	Leu	Asp	Gln	Gly
65					70				75					80	
Gly	Glu	Ile	Phe	Lys	Thr	Leu	His	Tyr	Leu	Ser	Asn	Leu	Ile	Gln	Ser
				85					90					95	
Ile	Lys	Thr	Pro	Leu	Gly	Thr	Lys	Glu	Asn	Pro	Ala	Arg	Val	Cys	Arg
			100					105					110		
Asp	Leu	Met	Asp	Cys	Glu	Gln	Lys	Met	Val	Asp	Gly	Thr	Tyr	Trp	Val
			115				120					125			
Asp	Pro	Asn	Leu	Gly	Cys	Ser	Ser	Asp	Thr	Ile	Glu	Val	Ser	Cys	Asn
			130			135					140				
Phe	Thr	His	Gly	Gly	Gln	Thr	Cys	Leu	Lys	Pro	Ile	Thr	Ala	Ser	Lys
145					150					155				160	
Val	Glu	Phe	Ala	Ile	Ser	Arg	Val	Gln	Met	Asn	Phe	Leu	His	Leu	Leu
				165				170						175	
Ser	Ser	Glu	Val	Thr	Gln	His	Ile	Thr	Ile	His	Cys	Leu	Asn	Met	Thr
			180					185					190		
Val	Trp	Gln	Glu	Gly	Thr	Gly	Gln	Thr	Pro	Ala	Lys	Gln	Ala	Val	Arg
		195					200					205			
Phe	Arg	Ala	Trp	Asn	Gly	Gln	Ile	Phe	Glu	Ala	Gly	Gly	Gln	Phe	Arg
	210					215					220				
Pro	Glu	Val	Ser	Met	Asp	Gly	Cys	Lys	Val	Gln	Asp	Gly	Arg	Trp	His

225		230		235		240
Gln Thr Leu Phe Thr Phe Arg Thr Gln Asp Pro Gln Gln Leu Pro Ile						
		245		250		255
Ile Ser Val Asp Asn Leu Pro Pro Ala Ser Ser Gly Lys Gln Tyr Arg						
	260		265		270	
Leu Glu Val Gly Pro Ala Cys Phe Leu						
	275		280			

<210> 3529
 <211> 3026
 <212> DNA
 <213> Homo sapiens

<400> 3529
 agctgctggt gcaggtgcgg atagatttca tctctgtcgc cagcgagttt aatgacgcc
 60
 tcgtcatctc caaccggggc ctgcgggatg gagagctggt tgaaattgtc attcagaaga
 120
 tggtggaccg ctggtcaggc tccattgagg ctggagtgcac tgctattcgg cctgaagacc
 180
 tggaattccc caaccccatg acagacattg actatgacac atggatgctg agtgggtacag
 240
 ccatcatgca agacggtaac acgatgcgca acaattatgg gtgtgacctg gatgcgctgg
 300
 gcacaggtgc acgcattggc atgatgcgaa ctgccaaagg cgacctgcac tacttcatca
 360
 acggccagga ccaaggcgct gcctgctcgg gcctgcctcc ggaggtgtat gcggtagtcg
 420
 atctctatgg ccagtgtgtc caagtgtcca tcaccaatgc caccggcccc atggacaaca
 480
 gcctggcgac cagcaacact gccaccgaga agtccttccc actgcnactc cccagtgggt
 540
 ggcgtggctc accgattcca cagtacttgc ggcaagaacg tcactctaga ggaggatggc
 600
 acgagggcag tgcgtgccgc tggctatgct catggccttg tcttcagtac caaggagctg
 660
 agggctgagg aagtctttga ggtgaaagtg gaagagctag atgagaagtg ggcaggttcc
 720
 ctgcggctgg ggctgaccac actagcaccg ggggagatgg gaccgggggc aggcggtggt
 780
 ggcccagggc tgctccttc cctgccagag ctccggacga agaccactg gatggtatcc
 840
 agctgtgaag tgaggcgtga tgggcagctc cagaggatga actatggccg gaacctagag
 900
 aggctggggg tgaagtggct ggctccaggg acaggggagg ggttgggagt ggaggtggca
 960
 gggagaggtg ggctgaacat cgtccgtcct tgcctacct cggtcctagg tggggagccg
 1020
 tgtgggtgtt cgtcgggggg cagatgacac gatgcacatc ctgggtggatg gagaggatat
 1080
 ggggcctgca gccactggca ttgccaagaa cgtgtgggct gtgttgatc tctacgggcc
 1140
 agtccgcggt gtgtcaattg tcagttccac gagactggag gagtcagaag gcacccagcc
 1200

tccttcccc agttcagaca ccggcagtga gggcgaggag gatgacgagg gcgaggagca
1260
tggcctggga ggccagaatg aagtgggtat tatacccacc accctcgagt tcctggagaa
1320
ccatgggaag aatatacctt tgtctaattg gaaccgtacg gccacacggg tggccagcta
1380
caatcagggc atcgttgtca tcaaccaacc tctggtgccc cagctgctgg tgcaggtgcg
1440
gatagatttc ctaaaccgac agtggacatc ttcccttgtc ctgggagtca tcacctgcgc
1500
gcctgagagg ctcaacttcc ctgcttctgc ctgtgccctc aaacgggcag cctggctgct
1560
gcgggggccgt ggggtcttcc acaacggtct caagatctgc gagaagtttg ggcccaatct
1620
ggacacgtgc cctgaaggca ccacctggg actgcggctg gacagctctg gggggctgca
1680
tcttcatgtt aatgggggtg accaggggggt agctgtgcca gatgtgcccc agccctgcca
1740
tgcgcttggt gacctctatg ggcagtgtga gcaggtatca aagagagtgt gtgctgggggt
1800
ccaccacctg ccgctagtcc tctaaagagc tgcgagtacc atgccctttg ctctcgcttc
1860
caagaactcc tgctgcttcc cgaagattat ttcattgcctc cgccaaagcg aagcctgtgc
1920
tactgtgagt cttgccggaa gctgcgagga gacgaggccc acaggcgagc aggggagcct
1980
ccccgggaat atgcactgcc ctttggctgg tgcaggttca acctcagagt gaatccccgc
2040
ctggaggctg ggacactaac caagaagtgg cacatggcat atcacgggag caatgttgcc
2100
gctgtacgga gagtgtgga ccgaggggag ctgggagcag gtactgcctc catcctgagc
2160
tgccgtcctt tgaagggaga acctggggta gggttcgagg agcctggcga gaactgtgca
2220
cctcctcggg aggagcagcc ccctcctgcg ctgctttccc cctcccttca atatgctggg
2280
gcggagaccc tggcctccaa agtgcaattc cgggaccca aatcccagcg gacgcaccag
2340
gctcaggtgg cgttccaggt gtgtgtgcgc cctggctcct acaccccggg accccttcc
2400
gctgcccttg gagaacctcc tgacctcac ttcagtccag ccgaacttga gtgggtcact
2460
aaggagaagg gggccacact cctctgtgcc ctgctggtac ggggtggaatg aggggtgaga
2520
caccactact acaagcacag tcggggccgc ggcccatgga ctctgagtgg cgactgcctc
2580
cacctcatte ccgtgactcg tggcatgcgc aggtgctgga gcttggcagc cgcgcaggag
2640
catgtaggca ggctctcaga tgtaggtggc aagtggcaca gctccatgtc cggaggccca
2700
gcactccgtc tgatgggagg agccgtggga gccagctcc aggccctggg acccctcttc
2760
atgcactgat ttggggaaca tgactccctt ttactccct accccacatc acttaattta
2820

tttccgtttt tgtttctggt tactgtgaat cccagaggag tctctccctg tgccacatg
 2880
 aagctgcttt ttccggggcc accgggcggg agtggggaag ggtgggcgca cggaagatgg
 2940
 gggcctctgt acagttgtta ctgactctga tttctaagga gccataaac accgtctcag
 3000
 agcaaaaaaaaa aaaaaaaaaa aaaaaa
 3026

<210> 3530
 <211> 206
 <212> PRT
 <213> Homo sapiens

<400> 3530
 Met Ala Ser Val Ser Lys Cys Pro Ser Pro Met Pro Pro Ala Pro Trp
 1 5 10 15
 Thr Thr Ala Trp Arg Pro Ala Thr Leu Pro Pro Arg Ser Pro Ser His
 20 25 30
 Cys Xaa Ser Pro Val Ala Gly Val Ala His Arg Phe His Ser Thr Cys
 35 40 45
 Gly Lys Asn Val Thr Leu Glu Glu Asp Gly Thr Arg Ala Val Arg Ala
 50 55 60
 Ala Gly Tyr Ala His Gly Leu Val Phe Ser Thr Lys Glu Leu Arg Ala
 65 70 75 80
 Glu Glu Val Phe Glu Val Lys Val Glu Glu Leu Asp Glu Lys Trp Ala
 85 90 95
 Gly Ser Leu Arg Leu Gly Leu Thr Thr Leu Ala Pro Gly Glu Met Gly
 100 105 110
 Pro Gly Ala Gly Gly Gly Gly Pro Gly Leu Pro Pro Ser Leu Pro Glu
 115 120 125
 Leu Arg Thr Lys Thr Thr Trp Met Val Ser Ser Cys Glu Val Arg Arg
 130 135 140
 Asp Gly Gln Leu Gln Arg Met Asn Tyr Gly Arg Asn Leu Glu Arg Leu
 145 150 155 160
 Gly Val Lys Trp Leu Ala Pro Gly Thr Gly Glu Gly Leu Gly Val Glu
 165 170 175
 Val Ala Gly Arg Gly Gly Leu Asn Ile Val Arg Pro Cys Pro Thr Ser
 180 185 190
 Val Leu Gly Gly Glu Pro Cys Gly Cys Ser Ser Gly Gly Arg
 195 200 205

<210> 3531
 <211> 879
 <212> DNA
 <213> Homo sapiens

<400> 3531
 nggatcctca gacttaggaa gggacgctct gaagatattt atagaattta cagccacgat
 60
 ggcaccgatt ctccccctga tgctgatgag gtgggttatcg tcctcaacaa cttcaaaagc
 120
 aaaattatta aagtgaaggt tcagaagaag gcagatatgg tgaacgaaga cttgctgagt
 180

gatggaacga gtgagaatga atctggattt tgggattcct tcaaatgggg ctttacagga
 240
 cagaagactg aggaagtga gcaagataaa gatgacataa ttaatatattt ctccgttgca
 300
 tctgggtcatc tctacgaaag atttcttcgc ataatgatgc tatccgtgct gaagaatacc
 360
 aagactcctg tgaaattctg gttcttgaag aattacttgt cccccacatt taaggagttt
 420
 ataccttaca tggcaaatga atacaatttc cagtatgagc ttgttcagta caaatggccc
 480
 cgggtggcttc atcaacaaac tgaaaaacag cgtatcatct ggggttacaa gatcctcttc
 540
 ctggatgtac ttttccact agttgttgac aagttcctgt ttgtggatgc tgatcagatt
 600
 gtacgaacag atctgaaaga gttaagagat ttcaatttgg atggtgctcc ttatggttac
 660
 actcctttct gtgacagccg aagagaaatg gacggctaca ggttctggaa gtcagggtac
 720
 tgggccagtc atttagccgg gcgaaagtat catatcaggt actgaaaaga agcactccta
 780
 acactgttac ggggttttcc ttaaaattga ttttgtgtgg ttaaaattgt gaataggtaa
 840
 tacattggta tggttgaaaa ataaaaatga taaaaaata
 879

<210> 3532

<211> 254

<212> PRT

<213> Homo sapiens

<400> 3532

Xaa Ile Leu Arg Leu Arg Lys Gly Arg Ser Glu Asp Ile Tyr Arg Ile
 1 5 10 15
 Tyr Ser His Asp Gly Thr Asp Ser Pro Pro Asp Ala Asp Glu Val Val
 20 25 30
 Ile Val Leu Asn Asn Phe Lys Ser Lys Ile Ile Lys Val Lys Val Gln
 35 40 45
 Lys Lys Ala Asp Met Val Asn Glu Asp Leu Leu Ser Asp Gly Thr Ser
 50 55 60
 Glu Asn Glu Ser Gly Phe Trp Asp Ser Phe Lys Trp Gly Phe Thr Gly
 65 70 75 80
 Gln Lys Thr Glu Glu Val Lys Gln Asp Lys Asp Asp Ile Ile Asn Ile
 85 90 95
 Phe Ser Val Ala Ser Gly His Leu Tyr Glu Arg Phe Leu Arg Ile Met
 100 105 110
 Met Leu Ser Val Leu Lys Asn Thr Lys Thr Pro Val Lys Phe Trp Phe
 115 120 125
 Leu Lys Asn Tyr Leu Ser Pro Thr Phe Lys Glu Phe Ile Pro Tyr Met
 130 135 140
 Ala Asn Glu Tyr Asn Phe Gln Tyr Glu Leu Val Gln Tyr Lys Trp Pro
 145 150 155 160
 Arg Trp Leu His Gln Thr Glu Lys Gln Arg Ile Ile Trp Gly Tyr
 165 170 175
 Lys Ile Leu Phe Leu Asp Val Leu Phe Pro Leu Val Val Asp Lys Phe

	180		185		190
Leu	Phe Val Asp Ala Asp Gln Ile Val Arg Thr Asp Leu Lys Glu Leu				
	195		200		205
Arg Asp Phe Asn Leu Asp Gly Ala Pro Tyr Gly Tyr Thr Pro Phe Cys					
	210		215		220
Asp Ser Arg Arg Glu Met Asp Gly Tyr Arg Phe Trp Lys Ser Gly Tyr					
225		230		235	240
Trp Ala Ser His Leu Ala Gly Arg Lys Tyr His Ile Arg Tyr					
	245		250		

<210> 3533

<211> 1151

<212> DNA

<213> Homo sapiens

<400> 3533

```

gaattcggca cgagggttc tataggagag ctttagaatg aagtcattta gaggagcagg
60
cgaatcctaa ccgcatctct ctcttttagct ggactgaacc caaacatgaa tgtcaacagc
120
atggacatga ccggtggctt gtcggtgaag gacccatccc agtcccagtc acgcctcccc
180
cagtggaagc accccaactc catggataac ttgcccagtg ccgcttcccc cctggagcag
240
aaccctagca agcatggtgc tatccctgga ggtctaagca ttgggcctcc aggtaagtcc
300
tccattgatg actcctatgg ccggtacgat ttaatccaga acagtgagtc accagccagt
360
cctcccgtag ctgttcccca tagctgggtca cgtgccaaat ctgacagtga taaaatctca
420
aatggctcta gcatcaactg gccccagaa ttccatccgg gagttccatg gaaaggactg
480
cagaatattg accctgagaa tgaccctgac gtcactcctg gcagtgtccc cactgggcct
540
accatcaaca ccaccatcca ggatgtcaac cgctacctcc tcaagagtgg agggtcctcc
600
ccgccatcat ctccagaatgc cacgctgcct tcttcgagtg cctggccact cagtgcctcc
660
ggctacagta gctctttcag cagcattgca tccgcaccta gtgttgagg taaactgtca
720
gacatcaaat cgacgtggtc ctctggccct acctcccaca cgcaagcttc tctgtctcat
780
gaactatgga aggtgcccag aaacagtact gcacccaaga ggccacctcc agggttaacc
840
aatcccaagc cctcctccac ctgggggtgcc agccccctcg gctggaccag ctctactcc
900
tcgggttctg cctggagcac cgacacctca ggaagaacca gcagctggct cgttcttcga
960
aacctcactc cccaggtgca atatgggtgcc cctgcatcac tgagcatgat ccagggaggg
1020
ttcccgttg gccccaatg cagatgaggc tgtctgggtg ggaggatag ttgggggttc
1080
ttggtcaggg tccataagtg acgctgcatg ggaggagatg agcaagtgcc aggattggct
1140

```

ccagcagcgg c
1151

<210> 3534
<211> 313
<212> PRT
<213> Homo sapiens

<400> 3534
Met Asn Val Asn Ser Met Asp Met Thr Gly Gly Leu Ser Val Lys Asp
1 5 10 15
Pro Ser Gln Ser Gln Ser Arg Leu Pro Gln Trp Thr His Pro Asn Ser
20 25 30
Met Asp Asn Leu Pro Ser Ala Ala Ser Pro Leu Glu Gln Asn Pro Ser
35 40 45
Lys His Gly Ala Ile Pro Gly Gly Leu Ser Ile Gly Pro Pro Gly Lys
50 55 60
Ser Ser Ile Asp Asp Ser Tyr Gly Arg Tyr Asp Leu Ile Gln Asn Ser
65 70 75 80
Glu Ser Pro Ala Ser Pro Pro Val Ala Val Pro His Ser Trp Ser Arg
85 90 95
Ala Lys Ser Asp Ser Asp Lys Ile Ser Asn Gly Ser Ser Ile Asn Trp
100 105 110
Pro Pro Glu Phe His Pro Gly Val Pro Trp Lys Gly Leu Gln Asn Ile
115 120 125
Asp Pro Glu Asn Asp Pro Asp Val Thr Pro Gly Ser Val Pro Thr Gly
130 135 140
Pro Thr Ile Asn Thr Thr Ile Gln Asp Val Asn Arg Tyr Leu Leu Lys
145 150 155 160
Ser Gly Gly Ser Ser Pro Pro Ser Ser Gln Asn Ala Thr Leu Pro Ser
165 170 175
Ser Ser Ala Trp Pro Leu Ser Ala Ser Gly Tyr Ser Ser Ser Phe Ser
180 185 190
Ser Ile Ala Ser Ala Pro Ser Val Ala Gly Lys Leu Ser Asp Ile Lys
195 200 205
Ser Thr Trp Ser Ser Gly Pro Thr Ser His Thr Gln Ala Ser Leu Ser
210 215 220
His Glu Leu Trp Lys Val Pro Arg Asn Ser Thr Ala Pro Thr Arg Pro
225 230 235 240
Pro Pro Gly Leu Thr Asn Pro Lys Pro Ser Ser Thr Trp Gly Ala Ser
245 250 255
Pro Leu Gly Trp Thr Ser Ser Tyr Ser Ser Gly Ser Ala Trp Ser Thr
260 265 270
Asp Thr Ser Gly Arg Thr Ser Ser Trp Leu Val Leu Arg Asn Leu Thr
275 280 285
Pro Gln Val Gln Tyr Gly Ala Pro Ala Ser Leu Ser Met Ile Gln Gly
290 295 300
Gly Phe Pro Leu Gly Pro Gln Cys Arg
305 310

<210> 3535
<211> 723
<212> DNA
<213> Homo sapiens

<400> 3535

tccggacaaa gctctcagta tcctgggtgc cattgtttct tctactcagc cgtgtttttt
 60
 ctactgagac agacaaaccc tcagcccagg acagcagagg ccgtgggagt tcaggccaac
 120
 cggcagacct gctacaggtt ctctctgctg gtgaccaccc accccacaac cactcaagaa
 180
 gcctcatcaa aacattgttg gagaaaactg ggtgccacg gaggagaaac ggaatgcaag
 240
 gagattgcaa tctgtgcttt gaaccagatg cactattact aatagctgga ggaaattttg
 300
 aagatcagct tagagaagaa gtggtccaga gagtttctct tctccttctc tattacatta
 360
 ttcacagga agagatctgt tcttcaaagc tcaacatgag taataaagag tataaatttt
 420
 acctacacag cctactgagc ctcaggcagg atgaagattc ctctttcctt tcacagaatg
 480
 agacagaaga tatcttggct ttcaccaggc agtactttga cactttctcaa agccagtgtg
 540
 tggaaaccaa aacgctgcag aaaaaatctg gaatagttag cagtgaaggt gctaataaaa
 600
 gtacgcttcc tcagttggca gccatgatca ttactttgtc cctccagggt gtttgtctgg
 660
 gacaaggaaa cttgccttcc ccagactact ttacagaata tattttcagt tccttgaatc
 720
 gta
 723

<210> 3536

<211> 163

<212> PRT

<213> Homo sapiens

<400> 3536

Met Gln Gly Asp Cys Asn Leu Cys Phe Glu Pro Asp Ala Leu Leu Leu
 1 5 10 15
 Ile Ala Gly Gly Asn Phe Glu Asp Gln Leu Arg Glu Glu Val Gln
 20 25 30
 Arg Val Ser Leu Leu Leu Tyr Tyr Ile Ile His Gln Glu Glu Ile
 35 40 45
 Cys Ser Ser Lys Leu Asn Met Ser Asn Lys Glu Tyr Lys Phe Tyr Leu
 50 55 60
 His Ser Leu Leu Ser Leu Arg Gln Asp Glu Asp Ser Ser Phe Leu Ser
 65 70 75 80
 Gln Asn Glu Thr Glu Asp Ile Leu Ala Phe Thr Arg Gln Tyr Phe Asp
 85 90 95
 Thr Ser Gln Ser Gln Cys Met Glu Thr Lys Thr Leu Gln Lys Lys Ser
 100 105 110
 Gly Ile Val Ser Ser Glu Gly Ala Asn Glu Ser Thr Leu Pro Gln Leu
 115 120 125
 Ala Ala Met Ile Ile Thr Leu Ser Leu Gln Gly Val Cys Leu Gly Gln
 130 135 140
 Gly Asn Leu Pro Ser Pro Asp Tyr Phe Thr Glu Tyr Ile Phe Ser Ser

145
Leu Asn Arg

150

155

160

<210> 3537
<211> 714
<212> DNA
<213> Homo sapiens

<400> 3537
tttttttttt tttttttttt tttttttttt tttttttttt agcaatatat atatataatt
60
tatttacatt cacgcccgat aaaacccta tgtgccccgg cggccgggca aggctgtgta
120
cataaggcca agagtaagtg cgtgaatgca ctttaagaaa agtcaggaca cgagcttcac
180
atgacaggcc ccgcgtgggc gaccagccag cctgggggac gggcacgcca cgccacacac
240
acactcacca ctgtacagcc tgggactccc attgcatatt cacaggcccc gccgggcagg
300
gcacctcaag gctgggggag gggcaggggc agggaggagc cgtgggggtgt ccctgggttg
360
gtgggagagg cagcatgtga gaggcaaagt tgcaccaaca ctgggcgtga gacgtgagca
420
gcctcagggtg tacggcatga gatgtgtgtg gttggggggg gtctgcgtga cccgggaggg
480
gggtgtgtgt gagatgagca cacgaggcat gcgtggcacg tgctcgtgtg gtggtcgcgt
540
gcctgaatcc aggggctacc ccctgtccgg ctgtggccct cggtcctgca gggttggaag
600
aagggtcctt cagacgtgcc cctaccagc aggcacagaa atgtttgcat aaggtccagc
660
tcaggcagga gctctggggc cctggcccag gccagtggtg tgcgtgcatg gcc
714

<210> 3538
<211> 154
<212> PRT
<213> Homo sapiens

<400> 3538
Met His Ala His Thr Gly Pro Gly Pro Gly Pro Gln Ser Ser Cys Leu
1 5 10 15
Ser Trp Thr Leu Cys Lys His Phe Cys Ala Cys Trp Val Gly Ala Arg
20 25 30
Leu Lys Asp Pro Ser Ser Asn Pro Ala Gly Pro Arg Ala Thr Ala Gly
35 40 45
Gln Gly Val Ala Pro Gly Phe Arg His Ala Thr Thr Thr Arg Ala Arg
50 55 60
Ala Thr His Ala Ser Cys Ala His Leu Thr His Thr Pro Leu Pro Gly
65 70 75 80
His Ala Asp Thr Pro Gln Pro His Thr Ser His Ala Val His Leu Arg
85 90 95
Leu Leu Thr Ser His Ala Gln Cys Trp Cys Thr Phe Ala Ser His Met

```

                100                105                110
Leu Pro Ser Pro Pro Thr Gln Gly His Pro Thr Ala Pro Pro Cys Pro
                115                120                125
Cys Pro Ser Pro Ser Leu Glu Val Pro Cys Pro Ala Gly Pro Val Asn
                130                135                140
Met Gln Trp Glu Ser Gln Ala Val Gln Trp
145                150

```

<210> 3539
 <211> 818
 <212> DNA
 <213> Homo sapiens

<400> 3539
 ngcgcgccag ggggaagttgc ccagcttggc tctggaagaa ccgagggtcg tctgattctg
 60
 ggcaatgggg gtgcctgtgg tcccagctgc tcgggaggct gaggcggaat tgcttgagcg
 120
 cggggggcgagg aggttgagc gagccgagat cgcgcaggta cgctccagtc tgggcgacaa
 180
 gagcgaaact cgatatcaaa aaaaaaaaaa acgtcctgat cccagagcct cttcacgcgt
 240
 cccctaccac agcacttcag agaagcaggt ctttaatacag tgtgtctaga tgcagctgct
 300
 gactgtcacc cctaccccg cttctctcca gtctgaggac ggccagtcac cccattgcc
 360
 cagaatcaga cgaccctcg ttcttccaga gccaaagctgg gcaacttccc ctggcaagcc
 420
 ttcaccagta tccacggccg tgggggaggc gccctgctgg gggacagatg gacccctact
 480
 gctgcccaca ccgtctacc caaggacagt gtttctctca ggaagaacca gagtgtgaat
 540
 gtgttcttgg gccacacagc catagatgag atgctgaaac tggggaacca ccctgtccac
 600
 cgtgtcgttg tgcacccga ctaccgtcag aatgagtcac ataactttag cggggacatc
 660
 gccctcctgg agctgcagca cagcatcccc ctggggccca acgtcctccc ggtctgtctg
 720
 cccgataatg agaccctcta ccgcagcggc ttgttgggct acgtcagtg gtttggcatg
 780
 gagatgggct ggctaactac tgagctgaag tactcgag
 818

<210> 3540
 <211> 180
 <212> PRT
 <213> Homo sapiens

<400> 3540
 Ser Val Cys Leu Asp Ala Ala Ala Asp Cys His Pro Tyr Pro Ala Ser
 1 5 10 15
 Leu Pro Val Cys Gly Arg Pro Val Thr Pro Ile Ala Gln Asn Gln Thr
 20 25 30
 Thr Leu Gly Ser Ser Arg Ala Lys Leu Gly Asn Phe Pro Trp Gln Ala

```

      35          40          45
Phe Thr Ser Ile His Gly Arg Gly Gly Gly Ala Leu Leu Gly Asp Arg
  50          55          60
Trp Ile Leu Thr Ala Ala His Thr Val Tyr Pro Lys Asp Ser Val Ser
  65          70          75          80
Leu Arg Lys Asn Gln Ser Val Asn Val Phe Leu Gly His Thr Ala Ile
      85          90          95
Asp Glu Met Leu Lys Leu Gly Asn His Pro Val His Arg Val Val Val
      100          105          110
His Pro Asp Tyr Arg Gln Asn Glu Ser His Asn Phe Ser Gly Asp Ile
      115          120          125
Ala Leu Leu Glu Leu Gln His Ser Ile Pro Leu Gly Pro Asn Val Leu
      130          135          140
Pro Val Cys Leu Pro Asp Asn Glu Thr Leu Tyr Arg Ser Gly Leu Leu
      145          150          155          160
Gly Tyr Val Ser Gly Phe Gly Met Glu Met Gly Trp Leu Thr Thr Glu
      165          170          175
Leu Lys Tyr Ser
      180

```

<210> 3541

<211> 722

<212> DNA

<213> Homo sapiens

<400> 3541

```

tctctccgac ggcgtgcagg tggccatttc aagaccgta ctaggtagat ggtcaattag
  60
agttcccagg gtttgaagcc tgtaactgct gccgccgctc aagccctcca gagcattgct
  120
acggctgctg cccttgctact actacctcca aatacgcttc tgctggtagt ggcggcagca
  180
ggaccaatta cctctttttt gctctccctc gagaagctcc agatggcgctc ttccgtgggc
  240
aacgtggccg acagcacaga accaacgaaa cgtatgcttt cctccaagg gttagctgag
  300
ttggcacatc gagaatatca ggcaggagat tttgaggcag ctgagagaca ctgcatgcag
  360
ctctggagac aagagccaga caatactggt gtgcttttat tactttcatc tatacacttc
  420
cagtgtcgaa ggctggacag atctgctcac tttagcactc tggcaattaa acagaacccc
  480
cttctggcag aagcttattc gaatttgagg aatgtgtaca aggaaagagg gcagttgcag
  540
gaggcaattg agcattatcg acatgcattg cgtctcaaac ctgatttcat cgatggttat
  600
attaacgctg cagccgcctt ggtagcagcg ggtgacatgg aaggggcagt acaagcttac
  660
gtctctgcac tccagcctgg gtgacaaagt gaggccctgt ctcaaaaaaaaa aaaaaaaaaa
  720
aa
  722

```

<210> 3542

<211> 153
 <212> PRT
 <213> Homo sapiens

<400> 3542

```

Met Ala Ser Ser Val Gly Asn Val Ala Asp Ser Thr Glu Pro Thr Lys
 1           5           10           15
Arg Met Leu Ser Phe Gln Gly Leu Ala Glu Leu Ala His Arg Glu Tyr
      20           25           30
Gln Ala Gly Asp Phe Glu Ala Ala Glu Arg His Cys Met Gln Leu Trp
      35           40           45
Arg Gln Glu Pro Asp Asn Thr Gly Val Leu Leu Leu Leu Ser Ser Ile
      50           55           60
His Phe Gln Cys Arg Arg Leu Asp Arg Ser Ala His Phe Ser Thr Leu
      65           70           75           80
Ala Ile Lys Gln Asn Pro Leu Leu Ala Glu Ala Tyr Ser Asn Leu Gly
      85           90           95
Asn Val Tyr Lys Glu Arg Gly Gln Leu Gln Glu Ala Ile Glu His Tyr
      100          105          110
Arg His Ala Leu Arg Leu Lys Pro Asp Phe Ile Asp Gly Tyr Ile Asn
      115          120          125
Ala Ala Ala Ala Leu Val Ala Ala Gly Asp Met Glu Gly Ala Val Gln
      130          135          140
Ala Tyr Val Ser Ala Leu Gln Pro Gly
      145          150

```

<210> 3543
 <211> 1206
 <212> DNA
 <213> Homo sapiens

<400> 3543

```

nntcagagtt ttgagttaag agctcaccat ttaatatata aattagtagt tcagaatctc
60
cagctaataga aagtatttta tgaatgctgt ccttaagacc gagtaacagc attgtgttca
120
gttttggttgt tgctcaggat gtgtaatagt ttctcttcag ccataagcca cgcttggtag
180
atattaattg agtggagaga tcttgcacct cttccagtta tgcatttggt gttgtcgtc
240
tgatttggag cacttggaag atcactgttt tgtgttctac gaccaattg agaggattat
300
gtggagctaa gttttaccaa tcaggatcat ccttccttgt gggtagcag gcagttataa
360
gattgcaaaa tgggtctccg gattcacttt gttgttgacc cacatgggtg gtgctgcatg
420
ggtttgattg tctttgtttg gttatacaat attgttttaa ttcccaaaat tgcctctttt
480
cctcactatg aagaaggaca tattccaggc atattaataa taatattcta tggcatttcc
540
atattctgtc tgggtgcctt agtgagggcc tccataactg atccaggaag actccctgag
600
aaccccaaga tcccacatgg agaaaggag ttctgggaat tatgtaacaa gtgtaatttg
660

```

atgagaccaa agcgttccca tcactgtagc cgctgcggcc actgtgtgag gagaatggat
 720
 catcactgtc catggattaa caattgtgtt ggtgaagata atcattggct ctttctgcag
 780
 ttgtgtttct aactgaact tcttacttgc tacgcactga tgttttcttt ctgccactat
 840
 tactattttc ttccactaaa aaagcgtaat ttggacctct ttgttttttag acatgaattg
 900
 gccataatga gactagcagc ctttatgggc attactatgt tagttggaat aactggactc
 960
 ttttacactc aactaattgg catcatcaca ccttgcagtc tcacccact caagtgtggc
 1020
 tctgtatcca acaacagtct tggagatctc atgaagattt ctgaaacttt tgctctgagg
 1080
 ataccttctt ttgtggttat gtgccctgaa aactccagcc tccgtgtctt caattcagtg
 1140
 aaactactac tctgcttggg ttccccctct atacaatggg ctaccaagtg actgcaaaca
 1200
 gaaatc
 1206

<210> 3544

<211> 273

<212> PRT

<213> Homo sapiens

<400> 3544

Met	Gly	Leu	Arg	Ile	His	Phe	Val	Val	Asp	Pro	His	Gly	Trp	Cys	Cys
1				5					10					15	
Met	Gly	Leu	Ile	Val	Phe	Val	Trp	Leu	Tyr	Asn	Ile	Val	Leu	Ile	Pro
			20					25					30		
Lys	Ile	Val	Leu	Phe	Pro	His	Tyr	Glu	Glu	Gly	His	Ile	Pro	Gly	Ile
		35					40					45			
Leu	Ile	Ile	Ile	Phe	Tyr	Gly	Ile	Ser	Ile	Phe	Cys	Leu	Val	Ala	Leu
	50					55					60				
Val	Arg	Ala	Ser	Ile	Thr	Asp	Pro	Gly	Arg	Leu	Pro	Glu	Asn	Pro	Lys
65					70				75					80	
Ile	Pro	His	Gly	Glu	Arg	Glu	Phe	Trp	Glu	Leu	Cys	Asn	Lys	Cys	Asn
			85					90					95		
Leu	Met	Arg	Pro	Lys	Arg	Ser	His	His	Cys	Ser	Arg	Cys	Gly	His	Cys
			100					105					110		
Val	Arg	Arg	Met	Asp	His	His	Cys	Pro	Trp	Ile	Asn	Asn	Cys	Val	Gly
		115					120					125			
Glu	Asp	Asn	His	Trp	Leu	Phe	Leu	Gln	Leu	Cys	Phe	Tyr	Thr	Glu	Leu
	130					135					140				
Leu	Thr	Cys	Tyr	Ala	Leu	Met	Phe	Ser	Phe	Cys	His	Tyr	Tyr	Tyr	Phe
145					150				155						160
Leu	Pro	Leu	Lys	Lys	Arg	Asn	Leu	Asp	Leu	Phe	Val	Phe	Arg	His	Glu
				165				170						175	
Leu	Ala	Ile	Met	Arg	Leu	Ala	Ala	Phe	Met	Gly	Ile	Thr	Met	Leu	Val
		180					185						190		
Gly	Ile	Thr	Gly	Leu	Phe	Tyr	Thr	Gln	Leu	Ile	Gly	Ile	Ile	Thr	Pro
	195						200					205			
Cys	Ser	Leu	Ile	Leu	Leu	Lys	Cys	Gly	Ser	Val	Ser	Asn	Asn	Ser	Leu

210	215	220
Gly Asp Leu Met Lys Ile Ser Glu Thr Phe Ala Leu Arg Ile Pro Ser		
225	230	235
Phe Val Val Met Cys Pro Glu Asn Ser Ser Leu Arg Val Phe Asn Ser		240
	245	250
Val Lys Leu Leu Leu Cys Leu Asp Ser Pro Leu Ile Gln Trp Ser Thr		255
	260	265
		270

Lys

<210> 3545

<211> 3657

<212> DNA

<213> Homo sapiens

<400> 3545

```

cctaggctgt tggagactga gtgagtgaat gtgtggagag tactaggctt ggcacaggcc
60
agagcagggtg ctcaggaggt ctggcccatc atctggctcc ggctgaccct tgccctcacc
120
ctggcagacc ctggctgggc atccatcagc aggggtgtgc tgggtgtgtga cgagtgtgtc
180
agcgtgcacc ggagcctggg acgccacatc tccattgtca agcaccttcg ccacagcgcc
240
tggcctccca cgctgctgca gatggtgcac acgcttgcca gcaacggggc caactccatc
300
tgggagcact ccctgctgga cccgcacaaa gtgcagagcg gccggcgtaa agccaacccc
360
caagacaaaag tccaccccat caagtcagag ttcatcaggg ccaagtacca gatgctggca
420
tttgtgcaca agcttccttg ccgggacgat gatggagtca ccgccaaaga cctcagcaag
480
caactacact cgagcgtgcg gacaggcaac ctggagacat gtctgcgcct gctctccctg
540
ggtgcccagg ccaacttctt ccaccagag aagggcacca cacctctgca cgtggctgcc
600
aaggcaggac agacactgca ggccgagctg cttgtagtgt atggggctga ccctggctcc
660
cctgatgtta atggccgcac acccattgac tatgccaggc aggcggggca ccatgagctg
720
gcggaaaggc tggttgagtg ccaatatgag ctactgacc ggctggcctt ctacctctgt
780
ggacgcaagc cggatcacia gaatgggcat tacatcatcc cacagatggc tgacagatct
840
cggcaaaaagt gcatgtctca gagccttgac ttatccgaat tggccaaaagc tgctaagaag
900
aagctgcagg cgctcagcaa ccggcttttt gaggaactcg ccatggacgt gtatgacgag
960
gtggatcgaa gagaaaatga tgcagtgtgg ctggctaccc aaaaccacag cactctggtg
1020
acagagcgca gtgctgtgcc ctctctgcct gtaaacccgg aatactcagc cacgcggaat
1080
caggggagac aaaagctggc ccgctttaat gcccgagagt ttgccacctt gatcatcgac
1140

```

attctcagtg aggccaaagcg gagacagcag ggcaagagcc tgagcagccc cacagacaac
1200
ctcgagctgt ctctgcgagg ccagagtgac ctcgacgacc aacacgacta cgacagcgtg
1260
gcctctgacg aggacacaga ccaggagccc ctgcgagca cggcgccac tcggagcaac
1320
cgggcccgga gcatggactc ctcggaacttg tctgacgggg ctgtgacgct gcaggagtag
1380
ctggagctga agaaggccct ggctacatcg gaggcaaagg tgcagcagct catgaaggtc
1440
aacagtagcc tgagcgacga gctccggagg ctgcagcgag agcactttgc acccataatc
1500
cacaagctgc aggcggagaa cctgcagctc cggcagcctc cagggccggt gccacacct
1560
ccactcccca gtgaacgggc ggaacacaca cccatggcgc caggcgggag cacacaccgc
1620
agggatcgcc aggccttttc catgtatgaa cctggctctg ccctgaagcc ctttgggggc
1680
ccccctgggg acgagctcac tacggcgctg cagcctttcc acagcactga gctagaggac
1740
gacgccatct attcagtga cgtccctgct ggcctttacc ggatccggaa aggggtgtct
1800
gcctcagctg tgcccttcac tccctcctcc ccgctgctgt cctgctccca ggagggaagc
1860
cgccacacga gcaagctttc ccgccacggc agtggagccg acagtgacta tgagaacacg
1920
caaagtgggg acccactgct ggggctggaa gggaagaggt ttctagagct gggcaaagag
1980
gaagacttcc acccagagct ggaaagcctg gatggagacc tagatcctgg gcttcccagc
2040
acagaggatg tcattcttgaa gacagagcag gtcaccaaga acattcagga actgttgagg
2100
gcagcccagg agttcaagca tgacagcttc gtgccctgct cagagaagat ccatttggtc
2160
gtgaccgaga tggcctccct ctcccaaag aggccagccc tggagccagt gcggagctca
2220
ctgcggctgc tcaacgccag cgcctaccgg ctgcagagtg agtgccggaa gacagtgcc
2280
ccagagcccg gcgcccagtg ggacttccag ctgctgactc agcaggtgat ccagtgcgcc
2340
tatgacatcg ccaaggctgc caagcagctg gtcaccatca ccacccgaga gaagaagcag
2400
tgacctctct cccacacccc tcacctgcac cctaggacct cactggccat aggagctggg
2460
ccactccaga cattaatccc ccccccaaca gagccactgg cacaagtgcc cttagtgctg
2520
ccacactccc tggcagccag gtgccctggt gcccacccct gtcgagcccc taaggatggg
2580
gaggtggggg ggcaggagct tctgtcccc acattccatg cacctcccct ctgtatatag
2640
catctcccc ctctagtga gcaggggcct gcaaggcatc actcccagcc cctcgccttc
2700
tagggcacc tcagcaaagg ggcaggtggg gacactccaa gtggggcagc tctccgtaca
2760

tgcgccccac ccccatgagc cagttcagcc ctactggggg ctgagcgggg gcatccccctc
 2820
 ctttgtacat agtctccatg gatgtccctg ccctgtagcc accagcccct tgctgtctctc
 2880
 cctttaatgc catatggccc ctgcctaggg cacaggcccc aacctgtgtg ctgggggtccc
 2940
 cagcagcaaa cactggaaag tctgtttttt tttttctttc ttcttcccca ccccttaatt
 3000
 ttaactttgt ggtaactgag tgcccccgcg tgcctgcgtg ttgagtgtgt gggcggcagt
 3060
 gccgttccgg aggccctggc catctggagt tttaggggt gaggggacca gagcagtggg
 3120
 accagcatgg ggatcagctt cccttcccca cctgggagcc agggactgtc cgggtagcca
 3180
 gttttggtcc tgccagctgc ctccctgac cctccccact ctgcccctt ctctatgaac
 3240
 ttaaataaaa aaccacttcc ctccatctcc tctgtctct gcgtggaggg ggaatgtgtg
 3300
 ctggctaggg tggaggactg agcacctgag cctggggctg gctccccggg gtccccgact
 3360
 cagctgggtg ctgtggagct gagtccccct cccgtaacct ctgcaaggcc agcaccacc
 3420
 atcactacct gcacctgctg tgggtcccacc ctctggaggg ctgggaacct ggctgcagcc
 3480
 tgggaaggct ggagaggcag acggtgggac ccaccagctc tctccccatc ccgcttcttc
 3540
 cctggggggc aggcctacc tgtgtggtgg tgggtgggct gtcaagacgt gtcattgtaca
 3600
 tttgtatcaa aaataaagaa gtgaccatga aaaaaaaaaa aaaaaaaga ttttaat
 3657

<210> 3546

<211> 792

<212> PRT

<213> Homo sapiens

<400> 3546

Val	Asn	Val	Trp	Arg	Val	Leu	Gly	Leu	Ala	Gln	Ala	Arg	Ala	Gly	Ala
1				5					10					15	
Gln	Glu	Val	Trp	Pro	Ile	Ile	Trp	Leu	Arg	Leu	Thr	Leu	Ala	Leu	Thr
		20						25					30		
Leu	Ala	Asp	Pro	Gly	Trp	Ala	Ser	Ile	Ser	Arg	Gly	Val	Leu	Val	Cys
		35					40					45			
Asp	Glu	Cys	Cys	Ser	Val	His	Arg	Ser	Leu	Gly	Arg	His	Ile	Ser	Ile
	50					55					60				
Val	Lys	His	Leu	Arg	His	Ser	Ala	Trp	Pro	Pro	Thr	Leu	Leu	Gln	Met
65					70					75				80	
Val	His	Thr	Leu	Ala	Ser	Asn	Gly	Ala	Asn	Ser	Ile	Trp	Glu	His	Ser
			85					90						95	
Leu	Leu	Asp	Pro	Ala	Gln	Val	Gln	Ser	Gly	Arg	Arg	Lys	Ala	Asn	Pro
		100					105						110		
Gln	Asp	Lys	Val	His	Pro	Ile	Lys	Ser	Glu	Phe	Ile	Arg	Ala	Lys	Tyr
	115						120					125			
Gln	Met	Leu	Ala	Phe	Val	His	Lys	Leu	Pro	Cys	Arg	Asp	Asp	Asp	Gly

130	135	140
Val Thr Ala Lys Asp Leu Ser Lys Gln Leu His Ser Ser Val Arg Thr		
145	150	155
Gly Asn Leu Glu Thr Cys Leu Arg Leu Leu Ser Leu Gly Ala Gln Ala		160
	165	170
Asn Phe Phe His Pro Glu Lys Gly Thr Thr Pro Leu His Val Ala Ala		175
	180	185
Lys Ala Gly Gln Thr Leu Gln Ala Glu Leu Leu Val Val Tyr Gly Ala		190
	195	200
Asp Pro Gly Ser Pro Asp Val Asn Gly Arg Thr Pro Ile Asp Tyr Ala		205
	210	215
Arg Gln Ala Gly His His Glu Leu Ala Glu Arg Leu Val Glu Cys Gln		220
225	230	235
Tyr Glu Leu Thr Asp Arg Leu Ala Phe Tyr Leu Cys Gly Arg Lys Pro		240
	245	250
Asp His Lys Asn Gly His Tyr Ile Ile Pro Gln Met Ala Asp Arg Ser		255
	260	265
Arg Gln Lys Cys Met Ser Gln Ser Leu Asp Leu Ser Glu Leu Ala Lys		270
	275	280
Ala Ala Lys Lys Lys Leu Gln Ala Leu Ser Asn Arg Leu Phe Glu Glu		285
	290	295
Leu Ala Met Asp Val Tyr Asp Glu Val Asp Arg Arg Glu Asn Asp Ala		300
305	310	315
Val Trp Leu Ala Thr Gln Asn His Ser Thr Leu Val Thr Glu Arg Ser		320
	325	330
Ala Val Pro Phe Leu Pro Val Asn Pro Glu Tyr Ser Ala Thr Arg Asn		335
	340	345
Gln Gly Arg Gln Lys Leu Ala Arg Phe Asn Ala Arg Glu Phe Ala Thr		350
	355	360
Leu Ile Ile Asp Ile Leu Ser Glu Ala Lys Arg Arg Gln Gln Gly Lys		365
	370	375
Ser Leu Ser Ser Pro Thr Asp Asn Leu Glu Leu Ser Leu Arg Ser Gln		380
385	390	395
Ser Asp Leu Asp Asp Gln His Asp Tyr Asp Ser Val Ala Ser Asp Glu		400
	405	410
Asp Thr Asp Gln Glu Pro Leu Arg Ser Thr Gly Ala Thr Arg Ser Asn		415
	420	425
Arg Ala Arg Ser Met Asp Ser Ser Asp Leu Ser Asp Gly Ala Val Thr		430
	435	440
Leu Gln Glu Tyr Leu Glu Leu Lys Lys Ala Leu Ala Thr Ser Glu Ala		445
	450	455
Lys Val Gln Gln Leu Met Lys Val Asn Ser Ser Leu Ser Asp Glu Leu		460
465	470	475
Arg Arg Leu Gln Arg Glu His Phe Ala Pro Ile Ile His Lys Leu Gln		480
	485	490
Ala Glu Asn Leu Gln Leu Arg Gln Pro Pro Gly Pro Val Pro Thr Pro		495
	500	505
Pro Leu Pro Ser Glu Arg Ala Glu His Thr Pro Met Ala Pro Gly Gly		510
	515	520
Ser Thr His Arg Arg Asp Arg Gln Ala Phe Ser Met Tyr Glu Pro Gly		525
	530	535
Ser Ala Leu Lys Pro Phe Gly Gly Pro Pro Gly Asp Glu Leu Thr Thr		540
545	550	555
Arg Leu Gln Pro Phe His Ser Thr Glu Leu Glu Asp Asp Ala Ile Tyr		560

```
<210> 3547
<211> 1039
<212> DNA
<213> Homo sapiens
```

```
<400> 3547
agatctcaga aaatagtttta tatttgttgt ggagaagatc atactgctgc tctaaccaag
60
gaaggtggag tgtttacttt tggagctgga gggatggtc agttgggcca taattctacc
120
agtcatgaaa taaacccaag gaaagttttt gaacttatgg gaagcattgt cactgagatt
180
gcttgtggac ggcagcacac ttctgctttt gttccttcac caggacgaat ttactctttt
240
gggcttggtg gtaatgggca gctgggaacc gggtcaacaa gcaacaggaa aagccccctt
300
actgtaaaag gaaattggta cccctataat gggcagtgtc taccagatat tgattctgaa
360
gaatatttct gtgtaaaaaag aatttttctca gggggagatc aaagcttttc acattactct
420
agtccccaga actgtggggc accagatgac ttcagatgtc ccaatccgac aaagcagatc
480
tggacagtga atgaagctct aattcagaaa tggctgagct atccttctgg aaggtttcct
540
```

gtggagatag ccaatgagat agatggaacg ttttcttcct ctgggtgcct aaatggaagt
 600
 ttttttagctg ttagcaatga tgatcactat agaacaggta ccagattttc aggggttgat
 660
 atgaatgctg ctaggctttt attccacaaa cttatacaac ctgatcatcc gcagatatct
 720
 cagcaggtgg cagctagttt ggaaaagaat cttattccta aactgactag ctccttacct
 780
 gatgttgaag cattgaggtt ttatcttact ctaccagaat gtcccctgat gagtgattcc
 840
 aacaatttca taacaatagc aattcccttt ggtacagctc ttgtgaacct agaaaaggca
 900
 ccaactgaaag tacttgaaaa ctggtggtca gtacttgaac ctccactatt cctcaagata
 960
 gtagaacttt ttaaggaagt tgtggtacat cttttgaaac tctacaagat cgggtattccc
 1020
 ctttctgaaa gaataatta
 1039

<210> 3548

<211> 346

<212> PRT

<213> Homo sapiens

<400> 3548

Arg	Ser	Gln	Lys	Ile	Val	Tyr	Ile	Cys	Cys	Gly	Glu	Asp	His	Thr	Ala
1				5					10					15	
Ala	Leu	Thr	Lys	Glu	Gly	Gly	Val	Phe	Thr	Phe	Gly	Ala	Gly	Gly	Tyr
			20					25					30		
Gly	Gln	Leu	Gly	His	Asn	Ser	Thr	Ser	His	Glu	Ile	Asn	Pro	Arg	Lys
		35					40					45			
Val	Phe	Glu	Leu	Met	Gly	Ser	Ile	Val	Thr	Glu	Ile	Ala	Cys	Gly	Arg
	50					55					60				
Gln	His	Thr	Ser	Ala	Phe	Val	Pro	Ser	Ser	Gly	Arg	Ile	Tyr	Ser	Phe
65					70					75				80	
Gly	Leu	Gly	Gly	Asn	Gly	Gln	Leu	Gly	Thr	Gly	Ser	Thr	Ser	Asn	Arg
				85					90					95	
Lys	Ser	Pro	Phe	Thr	Val	Lys	Gly	Asn	Trp	Tyr	Pro	Tyr	Asn	Gly	Gln
		100						105					110		
Cys	Leu	Pro	Asp	Ile	Asp	Ser	Glu	Tyr	Phe	Cys	Val	Lys	Arg	Ile	
		115					120				125				
Phe	Ser	Gly	Gly	Asp	Gln	Ser	Phe	Ser	His	Tyr	Ser	Ser	Pro	Gln	Asn
	130					135					140				
Cys	Gly	Pro	Pro	Asp	Asp	Phe	Arg	Cys	Pro	Asn	Pro	Thr	Lys	Gln	Ile
145					150					155				160	
Trp	Thr	Val	Asn	Glu	Ala	Leu	Ile	Gln	Lys	Trp	Leu	Ser	Tyr	Pro	Ser
			165					170						175	
Gly	Arg	Phe	Pro	Val	Glu	Ile	Ala	Asn	Glu	Ile	Asp	Gly	Thr	Phe	Ser
		180						185				190			
Ser	Ser	Gly	Cys	Leu	Asn	Gly	Ser	Phe	Leu	Ala	Val	Ser	Asn	Asp	Asp
	195					200					205				
His	Tyr	Arg	Thr	Gly	Thr	Arg	Phe	Ser	Gly	Val	Asp	Met	Asn	Ala	Ala
	210					215					220				
Arg	Leu	Leu	Phe	His	Lys	Leu	Ile	Gln	Pro	Asp	His	Pro	Gln	Ile	Ser

225					230					235				240	
Gln	Gln	Val	Ala	Ala	Ser	Leu	Glu	Lys	Asn	Leu	Ile	Pro	Lys	Leu	Thr
				245					250					255	
Ser	Ser	Leu	Pro	Asp	Val	Glu	Ala	Leu	Arg	Phe	Tyr	Leu	Thr	Leu	Pro
			260					265					270		
Glu	Cys	Pro	Leu	Met	Ser	Asp	Ser	Asn	Asn	Phe	Ile	Thr	Ile	Ala	Ile
		275					280					285			
Pro	Phe	Gly	Thr	Ala	Leu	Val	Asn	Leu	Glu	Lys	Ala	Pro	Leu	Lys	Val
	290					295					300				
Leu	Glu	Asn	Trp	Trp	Ser	Val	Leu	Glu	Pro	Pro	Leu	Phe	Leu	Lys	Ile
305					310					315					320
Val	Glu	Leu	Phe	Lys	Glu	Val	Val	Val	His	Leu	Leu	Lys	Leu	Tyr	Lys
				325					330					335	
Ile	Gly	Ile	Pro	Pro	Ser	Glu	Arg	Ile	Ile						
			340					345							

<210> 3549

<211> 2542

<212> DNA

<213> Homo sapiens

<400> 3549

```

caaacatcag aatcgattaa aaaaagtga gaaaagaagc gaataagttc caagagtcca
60
ggacatatgg taataactaga ccaaactaaa ggagatcatt gtagaccatc aagaagagga
120
agatatgaga aaattcatgg aagaagtaag gaaaaggaga gagctagtct agataaaaaa
180
agagataaag actacagaag gaaagagatc ttgccttttg aaaagatgaa ggaacaaagg
240
ttgagagaac atttagttcg ttttgaaagg ctgcgacgag caatggaact tcgaagacga
300
agagagattg cagagagaga gcgtcgagag cgagaacgca ttagaataat tcgtgaacgg
360
gaagaacggg aacgcttaca gagagagaga gagcgcctag aaattgaaag gcaaaaacta
420
gagagagaga gaatggaacg cgaacgcttg gaaagggaaac gcattcgtat tgaacaggaa
480
cgtcgtaagg aagctgaacg gattgctcga gaaagagagg aactcagaag gcaacaacag
540
cagcttcgtt atgaacaaga aaaaaggaat tccttgaaac gccacgtga ttagatcat
600
aggcgagatg atccttactg gagcgagaat aaaaagttgt ctctagatac agatgcacga
660
tttgccatg gatccgacta ctctcgccaa cagaacagat ttaatgactt tgatcaccga
720
gagaggggca ggtttctga gagttcagca gtacagtctt catcttttga aaggcgggat
780
cgctttgttg gtcaaagtga ggggaaaaaa gcacgaccta ctgcacgaag ggaagatcca
840
agcttcgaaa gatatcccaa aaatttcagt gactccagaa gaaatgagcc tccaccacca
900
agaaatgaac ttagagaatc agacaggcga gaagtacgag gggagcgaga cgaaaggaga
960

```

acggtgatta ttcattgacag gcctgatata actcatccta gacatcctcg agaggcaggg
1020
cccaatcctt ccagacccac cagctggaaa agtgatggaa gcatgtccac tgacaaacgg
1080
gaaacaagag ttgaaaggcc agaacgatct gggagagaag tatcagggca cagtgtgaga
1140
ggcgctcccc ctgggaatcg tagcagcgct tcggggtacg ggagcagaga gggagacaga
1200
ggagtcattca cagaccgagg aggtggatca cagcactatc ctgaggagcg acatgtggtt
1260
gaacgccatg gacgggacac aagcggacca aggaaagagt ggcattggtcc accctctcaa
1320
gggcctagct atcatgatac gaggcgaatg ggtgacggcc gggcaggagc aggcattgata
1380
acccaacatt caagtaacgc atccccaatt aatagaattg taaaaatcag tggcaattcc
1440
atgccaagag gaagtggctc cggatttaag ccatttaagg gtggacctcc ggcacgattc
1500
tgaaaatgag ctctctgcca aggttttaag ataatttatt gaaatctcct gtaaaacttta
1560
cttgactact tatgaagagg acctctgact tgcttgagag ttctgtcaga cttttctttt
1620
taaaaatttta acatgattgc ttttctcaat tttggagaag atgtttaaat agttctgttg
1680
taacttttaa tagttttgtg tatcattcaa ctttttttct tgcagcaccg aggcacattt
1740
gaaaagatgg aattgaagtc gttttgttta acgctgtgtg aatataaaga gtagtttgca
1800
gctgtgtggt agtggtttaa tttgcagcct tagctctgtg gtgtctggct ctagagttac
1860
ttctttttac caagcatttt cagcctccat tttgaaggct gtctacactt aagaagtctt
1920
agctgtctaa tttttagaga ataagattgt tcattgcatt tctgagtatt atgtaacctt
1980
tttttgcaga aggtactgtt acattaagtg catctgtgta tcctggttta aaaaaatgta
2040
atcttttttg aaataaacct tcatattctg tatagttgct aaagtgttga gaaccttttt
2100
aattgtaaaa tgagaaccga ttttcagttt agtgtagcag cacacttggt caggtttgca
2160
tggtatgaaa ccaaatagat tcatgaaacc ttggccatga ggtttgtttc acaaggttct
2220
tagaccgagt tgtgcaggta agtgcacttt taggtaattc gcaactgttg tttgatggat
2280
aaattccatc tctgggaatt gtgtgggtat taatgtttcc atgttcccaa ctatgttgag
2340
aagtggaaaa aaaccaggt tctagatggg tgaatcagtt gggttttgta aatacttgta
2400
tgtggggaag acattgttgt ctttttgtga aaataaaaaat ccacacctgg aaaaaaaaaa
2460
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
2520
aaaaaaaaaa aaaaaaaaaa aa
2542

<210> 3550
 <211> 500
 <212> PRT
 <213> Homo sapiens

<400> 3550

Gln	Thr	Ser	Glu	Ser	Ile	Lys	Lys	Ser	Glu	Glu	Lys	Lys	Arg	Ile	Ser
1				5					10					15	
Ser	Lys	Ser	Pro	Gly	His	Met	Val	Ile	Leu	Asp	Gln	Thr	Lys	Gly	Asp
			20					25					30		
His	Cys	Arg	Pro	Ser	Arg	Arg	Gly	Arg	Tyr	Glu	Lys	Ile	His	Gly	Arg
		35					40					45			
Ser	Lys	Glu	Lys	Glu	Arg	Ala	Ser	Leu	Asp	Lys	Lys	Arg	Asp	Lys	Asp
	50					55					60				
Tyr	Arg	Arg	Lys	Glu	Ile	Leu	Pro	Phe	Glu	Lys	Met	Lys	Glu	Gln	Arg
65					70					75					80
Leu	Arg	Glu	His	Leu	Val	Arg	Phe	Glu	Arg	Leu	Arg	Arg	Ala	Met	Glu
			85					90						95	
Leu	Arg	Arg	Arg	Arg	Glu	Ile	Ala	Glu	Arg	Glu	Arg	Arg	Glu	Arg	Glu
			100					105					110		
Arg	Ile	Arg	Ile	Ile	Arg	Glu	Arg	Glu	Glu	Arg	Glu	Arg	Leu	Gln	Arg
		115				120						125			
Glu	Arg	Glu	Arg	Leu	Glu	Ile	Glu	Arg	Gln	Lys	Leu	Glu	Arg	Glu	Arg
	130					135					140				
Met	Glu	Arg	Glu	Arg	Leu	Glu	Arg	Glu	Arg	Ile	Arg	Ile	Glu	Gln	Glu
145					150					155					160
Arg	Arg	Lys	Glu	Ala	Glu	Arg	Ile	Ala	Arg	Glu	Arg	Glu	Glu	Leu	Arg
			165					170						175	
Arg	Gln	Gln	Gln	Gln	Leu	Arg	Tyr	Glu	Gln	Glu	Lys	Arg	Asn	Ser	Leu
			180					185					190		
Lys	Arg	Pro	Arg	Asp	Val	Asp	His	Arg	Arg	Asp	Asp	Pro	Tyr	Trp	Ser
	195					200						205			
Glu	Asn	Lys	Lys	Leu	Ser	Leu	Asp	Thr	Asp	Ala	Arg	Phe	Gly	His	Gly
	210					215					220				
Ser	Asp	Tyr	Ser	Arg	Gln	Gln	Asn	Arg	Phe	Asn	Asp	Phe	Asp	His	Arg
225					230					235					240
Glu	Arg	Gly	Arg	Phe	Pro	Glu	Ser	Ser	Ala	Val	Gln	Ser	Ser	Ser	Phe
			245						250					255	
Glu	Arg	Arg	Asp	Arg	Phe	Val	Gly	Gln	Ser	Glu	Gly	Lys	Lys	Ala	Arg
			260					265					270		
Pro	Thr	Ala	Arg	Arg	Glu	Asp	Pro	Ser	Phe	Glu	Arg	Tyr	Pro	Lys	Asn
	275					280						285			
Phe	Ser	Asp	Ser	Arg	Arg	Asn	Glu	Pro	Pro	Pro	Pro	Pro	Asn	Glu	Leu
	290					295						300			
Arg	Glu	Ser	Asp	Arg	Arg	Glu	Val	Arg	Gly	Glu	Arg	Asp	Glu	Arg	Arg
305					310					315					320
Thr	Val	Ile	Ile	His	Asp	Arg	Pro	Asp	Ile	Thr	His	Pro	Arg	His	Pro
				325					330					335	
Arg	Glu	Ala	Gly	Pro	Asn	Pro	Ser	Arg	Pro	Thr	Ser	Trp	Lys	Ser	Asp
			340					345					350		
Gly	Ser	Met	Ser	Thr	Asp	Lys	Arg	Glu	Thr	Arg	Val	Glu	Arg	Pro	Glu
	355					360						365			
Arg	Ser	Gly	Arg	Glu	Val	Ser	Gly	His	Ser	Val	Arg	Gly	Ala	Pro	Pro

370		375		380
Gly Asn Arg Ser Ser Ala Ser Gly Tyr Gly Ser Arg Glu Gly Asp Arg				
385		390		400
Gly Val Ile Thr Asp Arg Gly Gly Gly Ser Gln His Tyr Pro Glu Glu				
	405		410	415
Arg His Val Val Glu Arg His Gly Arg Asp Thr Ser Gly Pro Arg Lys				
	420		425	430
Glu Trp His Gly Pro Pro Ser Gln Gly Pro Ser Tyr His Asp Thr Arg				
	435		440	445
Arg Met Gly Asp Gly Arg Ala Gly Ala Gly Met Ile Thr Gln His Ser				
	450		455	460
Ser Asn Ala Ser Pro Ile Asn Arg Ile Val Gln Ile Ser Gly Asn Ser				
465		470		475
Met Pro Arg Gly Ser Gly Ser Gly Phe Lys Pro Phe Lys Gly Gly Pro				480
	485		490	495
Pro Arg Arg Phe				
500				

<210> 3551
 <211> 545
 <212> DNA
 <213> Homo sapiens

<400> 3551
 nattcggcac gaggtaaagt ctattagaat ttgctagtaa aatttaaaaa ggtatgtgac
 60
 atttcttaag ataattgaga aagataaact tctttttcag gaggggtccat cttcctgcca
 120
 tttcttgtga ctggctataa attccatgca gtgctggaat gtgcttctca cagtttagagt
 180
 gctgagcacc tgttttatct cacactccct tgattcctgg ggtaaattccc atctccgcag
 240
 catgggctcc agttaaatc attagtggc cagatgtgtg tcccctgtca gctggccaag
 300
 taacccact gtttatcgac aggttctcag gaatcagata gctcgcagtc ggccaagaag
 360
 gacatgctgg ctgccttgaa gtccaggcag gaagctctgg aggaaacct gcgtcagagg
 420
 ctggaggaac tgaagaagct gtgtctccga gaagctgtaa gcctttccta gctcatcccc
 480
 ttgaaattgg tgttgtctgt gatgtcactg atctttctga tgtcatttga tctttttgat
 540
 gtcac
 545

<210> 3552
 <211> 55
 <212> PRT
 <213> Homo sapiens

<400> 3552
 Pro His Cys Leu Ser Thr Gly Ser Gln Glu Ser Asp Ser Ser Gln Ser
 1 5 10 15
 Ala Lys Lys Asp Met Leu Ala Ala Leu Lys Ser Arg Gln Glu Ala Leu

	20		25		30										
Glu	Glu	Thr	Leu	Arg	Gln	Arg	Leu	Glu	Glu	Leu	Lys	Lys	Leu	Cys	Leu
	35		40		45										
Arg	Glu	Ala	Val	Ser	Leu	Ser									
	50				55										

<210> 3553
 <211> 1412
 <212> DNA
 <213> Homo sapiens

<400> 3553
 tacacagtga ctatggatgt gcattccagg tacagaactg aggcccatca ggatgtggtg
 60
 ggaagattta atgaaagggt tattctgtct ctggcctctt gtaagaagtg tctcgtcatt
 120
 gatgaccagc tcaacatcct gcccatctcc tcccacgttg ccaccatgga ggccctgcct
 180
 cccagactc cggatgagag tcttggtcct tctgatctgg agctgaggga gttgaaggag
 240
 agcttgacag acaccagcc tgtgggtgtg ttggtggact gctgtaagac tctagaccag
 300
 gccaaagctg tcttgaaatt tatcgagggc atctctgaaa agaccctgag gagtactgtt
 360
 gcactcacag ctgctcgagg acggggaaaa tctgcagccc tgggattggc gattgctggg
 420
 gcggtggcat ttgggtactc caatatcttt gttacctccc caagccctga taacctccat
 480
 actctgtttg aatttgtatt taaaggattt gatgctctgc aatatcagga acatctggat
 540
 tatgagatta tccagtctct aaatcctgaa tttaacaaag cagtgatcat agtgaatgta
 600
 tttcgagaac acaggcagac tattcagtat atacatcctg cagatgctgt gaagctgggc
 660
 caggctgaac tagttgtgat tgatgaagct gccgccatcc ccctcccctt ggtgaagagc
 720
 ctacttggcc cctaccttgt ttcatggca tccaccatca atggctatga gggcactggc
 780
 cggtcactgt ccctcaagct aattcagcag ctccgtcaac agagcgccca gagccaggtc
 840
 agcaccactg ctgagaataa gaccacgacg acagccagat tggcatcagc gcggacactg
 900
 catgagggtt ccctccagga gtcaatccga tacgcccctg gggatgcagt ggagaagtgg
 960
 ctgaatgact tgctgtgcct ggattgcctc aacatcactc ggatagtctc aggctgcccc
 1020
 ttgcctgaag cttgtgaact gtactatggt aatagagata ccctcttttg ctaccacaag
 1080
 gcctctgaag ttttctcca acggetttag gccctctacg tggcttctca ctacaagaac
 1140
 tctcccaatg atctccagat gctctccgat gcaccttctc accatctctt ctgccttctg
 1200
 cctcctgtgc cccccacca gaatgccctt ccaaaagtgc ttgctgttat ccaggatatg
 1260

gaacagagggc gtccttgtgg cagtgatttg gggaaccact gaggcacag gaattagtgg
 1320
 cttaataact gcattgtggg agttttgaaa ctgtggagtc ctggtctgga accaaggggc
 1380
 tgggtctgct gagacaggtg actaggggtgc ac
 1412

<210> 3554

<211> 419

<212> PRT

<213> Homo sapiens

<400> 3554

Tyr	Thr	Val	Thr	Met	Asp	Val	His	Ser	Arg	Tyr	Arg	Thr	Glu	Ala	His
1				5					10					15	
Gln	Asp	Val	Val	Gly	Arg	Phe	Asn	Glu	Arg	Phe	Ile	Leu	Ser	Leu	Ala
		20						25					30		
Ser	Cys	Lys	Lys	Cys	Leu	Val	Ile	Asp	Asp	Gln	Leu	Asn	Ile	Leu	Pro
		35					40					45			
Ile	Ser	Ser	His	Val	Ala	Thr	Met	Glu	Ala	Leu	Pro	Pro	Gln	Thr	Pro
	50					55					60				
Asp	Glu	Ser	Leu	Gly	Pro	Ser	Asp	Leu	Glu	Leu	Arg	Glu	Leu	Lys	Glu
65					70				75					80	
Ser	Leu	Gln	Asp	Thr	Gln	Pro	Val	Gly	Val	Leu	Val	Asp	Cys	Cys	Lys
			85					90						95	
Thr	Leu	Asp	Gln	Ala	Lys	Ala	Val	Leu	Lys	Phe	Ile	Glu	Gly	Ile	Ser
			100					105					110		
Glu	Lys	Thr	Leu	Arg	Ser	Thr	Val	Ala	Leu	Thr	Ala	Ala	Arg	Gly	Arg
		115					120					125			
Gly	Lys	Ser	Ala	Ala	Leu	Gly	Leu	Ala	Ile	Ala	Gly	Ala	Val	Ala	Phe
	130					135				140					
Gly	Tyr	Ser	Asn	Ile	Phe	Val	Thr	Ser	Pro	Ser	Pro	Asp	Asn	Leu	His
145				150					155					160	
Thr	Leu	Phe	Glu	Phe	Val	Phe	Lys	Gly	Phe	Asp	Ala	Leu	Gln	Tyr	Gln
			165					170					175		
Glu	His	Leu	Asp	Tyr	Glu	Ile	Ile	Gln	Ser	Leu	Asn	Pro	Glu	Phe	Asn
		180						185				190			
Lys	Ala	Val	Ile	Ile	Val	Asn	Val	Phe	Arg	Glu	His	Arg	Gln	Thr	Ile
		195				200						205			
Gln	Tyr	Ile	His	Pro	Ala	Asp	Ala	Val	Lys	Leu	Gly	Gln	Ala	Glu	Leu
	210					215					220				
Val	Val	Ile	Asp	Glu	Ala	Ala	Ala	Ile	Pro	Leu	Pro	Leu	Val	Lys	Ser
225					230					235				240	
Leu	Leu	Gly	Pro	Tyr	Leu	Val	Phe	Met	Ala	Ser	Thr	Ile	Asn	Gly	Tyr
			245					250					255		
Glu	Gly	Thr	Gly	Arg	Ser	Leu	Ser	Leu	Lys	Leu	Ile	Gln	Gln	Leu	Arg
		260						265				270			
Gln	Gln	Ser	Ala	Gln	Ser	Gln	Val	Ser	Thr	Thr	Ala	Glu	Asn	Lys	Thr
		275					280					285			
Thr	Thr	Thr	Ala	Arg	Leu	Ala	Ser	Ala	Arg	Thr	Leu	His	Glu	Val	Ser
	290					295					300				
Leu	Gln	Glu	Ser	Ile	Arg	Tyr	Ala	Pro	Gly	Asp	Ala	Val	Glu	Lys	Trp
305				310					315					320	
Leu	Asn	Asp	Leu	Leu	Cys	Leu	Asp	Cys	Leu	Asn	Ile	Thr	Arg	Ile	Val

```

<400> 3555
nngccggccg cgcccgggct gggacgtccg agcggaaga tgttttccgc cctgaagaag
60
ctggtgggggt cggaccaggc cccggggccgg gacaagaaca tccccgccgg gctgcagtcc
120
atgaaccagg cgttgcagag gcgcttcgcc aaggggggtgc agtacaacat gaagatagtg
180
atccggggag acaggaacac gggcaagaca gcgctgtggc accgcctgca gggccggccg
240
ttcgtggagg agtacatccc cacacaggag atccagggtca ccagcatcca ctggagctac
300
aagaccacgg atgacatcgt gaaggttgaa gtctgggatg tagtagacaa agggaaatgc
360
aaaaagcgag gcgacggctt aaagatggag aacgaccccc aggaggcgga gtctgaaatg
420
gccctggatg ctgagttcct ggacgtgtac aagaactgca acggggtggt catgatgttc
480
gacattacca agcagtggac cttcaattac attctccggg agcttccaaa agtgcccacc
540
cacgtgccag tgtgcgtgct ggggaactac cgggacatgg gcgagcaccg agtcacnnc
600
tgccggacgn acgtgcgtga cttcatcgac aacctggaca gacctccagg ttctcctac
660
ttccgctatg ctgagtcttc catgaagaac agcttcggcc taaagtacct tcataagttc
720
ttcaatatcc cattttttgca gcttcagagg gagacgctgt tgccggcagct ggagacgaac
780
cagctggaca tggacgccac gctggaggag ctgtcgggtg agcaggagac ggaggaccag
840
aactacggca tcttcctgga gatgatggag gctcgcagcc gtggccatgc gtccccactg
900
gcggccaacg ggcagagccc atccccgggc tcccagtcac cagtggtgcc tgcaggcgct
960
gtgtccacgg ggagctccag ccccggcaca gcccgccccg cccacagct gcccctcaat
1020

```

ggttgccccca ccatacctc
1038

<210> 3556
<211> 333
<212> PRT
<213> Homo sapiens

<400> 3556
Met Phe Ser Ala Leu Lys Lys Leu Val Gly Ser Asp Gln Ala Pro Gly
1 5 10 15
Arg Asp Lys Asn Ile Pro Ala Gly Leu Gln Ser Met Asn Gln Ala Leu
20 25 30
Gln Arg Arg Phe Ala Lys Gly Val Gln Tyr Asn Met Lys Ile Val Ile
35 40 45
Arg Gly Asp Arg Asn Thr Gly Lys Thr Ala Leu Trp His Arg Leu Gln
50 55 60
Gly Arg Pro Phe Val Glu Glu Tyr Ile Pro Thr Gln Glu Ile Gln Val
65 70 75 80
Thr Ser Ile His Trp Ser Tyr Lys Thr Thr Asp Asp Ile Val Lys Val
85 90 95
Glu Val Trp Asp Val Val Asp Lys Gly Lys Cys Lys Lys Arg Gly Asp
100 105 110
Gly Leu Lys Met Glu Asn Asp Pro Gln Glu Ala Glu Ser Glu Met Ala
115 120 125
Leu Asp Ala Glu Phe Leu Asp Val Tyr Lys Asn Cys Asn Gly Val Val
130 135 140
Met Met Phe Asp Ile Thr Lys Gln Trp Thr Phe Asn Tyr Ile Leu Arg
145 150 155 160
Glu Leu Pro Lys Val Pro Thr His Val Pro Val Cys Val Leu Gly Asn
165 170 175
Tyr Arg Asp Met Gly Glu His Arg Val Ile Xaa Cys Arg Thr Xaa Val
180 185 190
Arg Asp Phe Ile Asp Asn Leu Asp Arg Pro Pro Gly Ser Ser Tyr Phe
195 200 205
Arg Tyr Ala Glu Ser Ser Met Lys Asn Ser Phe Gly Leu Lys Tyr Leu
210 215 220
His Lys Phe Phe Asn Ile Pro Phe Leu Gln Leu Gln Arg Glu Thr Leu
225 230 235 240
Leu Arg Gln Leu Glu Thr Asn Gln Leu Asp Met Asp Ala Thr Leu Glu
245 250 255
Glu Leu Ser Val Gln Gln Glu Thr Glu Asp Gln Asn Tyr Gly Ile Phe
260 265 270
Leu Glu Met Met Glu Ala Arg Ser Arg Gly His Ala Ser Pro Leu Ala
275 280 285
Ala Asn Gly Gln Ser Pro Ser Pro Gly Ser Gln Ser Pro Val Val Pro
290 295 300
Ala Gly Ala Val Ser Thr Gly Ser Ser Ser Pro Gly Thr Ala Gln Pro
305 310 315 320
Ala Pro Gln Leu Pro Leu Asn Gly Cys Pro Thr Ile Leu
325 330

<210> 3557
<211> 486

<212> DNA

<213> Homo sapiens

<400> 3557

tcagtgcacaa ggaggacgtt tgggcacagc ggcattgcag tgcacacgtg gtagtgcattgt
60
ccggcattga tcaagtccat ctgggctatg gccataagcc aacaccagtt ctatctggac
120
agaaagcaga gtaagtccaa aatccatgca gcacgcagcc tgagtgcagat cgccatcgac
180
ctgaccgaga cggggacgct gaagacctcg aagctggcca acatgggtag caaggggaag
240
atcatcagcg gcagcagcgg cagcctgctg tcttcaggat ctggtgccag gagacactgc
300
attctactcc caggttctca ggaatcagat agctgcagct cggccaagaa ggacatgctg
360
gctgccttga agtccaggca ggaagctctg gaggaaaccc tgcgtcagag gctggaggaa
420
ctgaagaagc tgtgtctccg agaagctgag ctcacgggca agctgccagt agaatatccc
480
ctggat
486

<210> 3558

<211> 162

<212> PRT

<213> Homo sapiens

<400> 3558

Ser	Val	Thr	Arg	Arg	Thr	Phe	Gly	His	Ser	Gly	Ile	Ala	Val	His	Thr
1				5				10						15	
Trp	Tyr	Ala	Cys	Pro	Ala	Leu	Ile	Lys	Ser	Ile	Trp	Ala	Met	Ala	Ile
			20					25					30		
Ser	Gln	His	Gln	Phe	Tyr	Leu	Asp	Arg	Lys	Gln	Ser	Lys	Ser	Lys	Ile
		35					40					45			
His	Ala	Ala	Arg	Ser	Leu	Ser	Glu	Ile	Ala	Ile	Asp	Leu	Thr	Glu	Thr
	50				55					60					
Gly	Thr	Leu	Lys	Thr	Ser	Lys	Leu	Ala	Asn	Met	Gly	Ser	Lys	Gly	Lys
65				70					75					80	
Ile	Ile	Ser	Gly	Ser	Ser	Gly	Ser	Leu	Leu	Ser	Ser	Gly	Ser	Gly	Ala
			85					90					95		
Arg	Arg	His	Cys	Ile	Leu	Leu	Pro	Gly	Ser	Gln	Glu	Ser	Asp	Ser	Ser
			100					105					110		
Gln	Ser	Ala	Lys	Lys	Asp	Met	Leu	Ala	Ala	Leu	Lys	Ser	Arg	Gln	Glu
		115				120						125			
Ala	Leu	Glu	Glu	Thr	Leu	Arg	Gln	Arg	Leu	Glu	Glu	Leu	Lys	Lys	Leu
	130					135					140				
Cys	Leu	Arg	Glu	Ala	Glu	Leu	Thr	Gly	Lys	Leu	Pro	Val	Glu	Tyr	Pro
145					150					155					160
Leu	Asp														

<210> 3559

<211> 673

<212> DNA

<213> Homo sapiens

<400> 3559

gaaggagcga gcgggggagc gaggcgttta cctggaggca gcggcttggg cgcgcagagc
 60
 ggccgcgggt ccccccgcacc tgcggccatg gatgaggagc gcgccctcta catcgccgg
 120
 gccggcgaag caggggctat cgagcgggtc ctgagggatt acagcgacaa gcatagggct
 180
 actttcaaat ttgaatcaac agatgaagat aaaagaaaga aactctgtga aggcatattt
 240
 aaagtcctta taaaggacat cccaacaaca tgtcaagtgt cctgcctgga agtactccgc
 300
 attctctcca gagacaaaaa ggttttagtt cctgtgacaa ctaaggaaaa tatgcagata
 360
 ctgctgcgac tagccaagct aaatgagtta gatgattctt tggagaaagt atcagagttc
 420
 ccagttattg tggagtcatt aaaatgtctg tgtaatatag tgttcaacag tcagatggca
 480
 cagcagctca gcctggaact taatcttgct gcaaagctct gtaacctctt gagaaagtgc
 540
 aaggaccgga aatttatcaa tgacattaag tgctttgact tgcgcttgct cttccttctg
 600
 tcacttttgc acaccgacat caggtcacaa ttgcgctatg agctccaggg actaccgctg
 660
 ctaacgcaga tcg
 673

<210> 3560

<211> 195

<212> PRT

<213> Homo sapiens

<400> 3560

Met	Asp	Glu	Glu	Arg	Ala	Leu	Tyr	Ile	Val	Arg	Ala	Gly	Glu	Ala	Gly
1				5					10					15	
Ala	Ile	Glu	Arg	Val	Leu	Arg	Asp	Tyr	Ser	Asp	Lys	His	Arg	Ala	Thr
			20					25					30		
Phe	Lys	Phe	Glu	Ser	Thr	Asp	Glu	Asp	Lys	Arg	Lys	Lys	Leu	Cys	Glu
		35					40					45			
Gly	Ile	Phe	Lys	Val	Leu	Ile	Lys	Asp	Ile	Pro	Thr	Thr	Cys	Gln	Val
	50					55				60					
Ser	Cys	Leu	Glu	Val	Leu	Arg	Ile	Leu	Ser	Arg	Asp	Lys	Lys	Val	Leu
65					70				75					80	
Val	Pro	Val	Thr	Thr	Lys	Glu	Asn	Met	Gln	Ile	Leu	Leu	Arg	Leu	Ala
			85					90						95	
Lys	Leu	Asn	Glu	Leu	Asp	Asp	Ser	Leu	Glu	Lys	Val	Ser	Glu	Phe	Pro
		100						105					110		
Val	Ile	Val	Glu	Ser	Leu	Lys	Cys	Leu	Cys	Asn	Ile	Val	Phe	Asn	Ser
		115					120					125			
Gln	Met	Ala	Gln	Gln	Leu	Ser	Leu	Glu	Leu	Asn	Leu	Ala	Ala	Lys	Leu
	130					135					140				
Cys	Asn	Leu	Leu	Arg	Lys	Cys	Lys	Asp	Arg	Lys	Phe	Ile	Asn	Asp	Ile

<210> 3563
<211> 359
<212> DNA
<213> Homo sapiens

<400> 3563
nnacgcgtag tcgaactgcc cgcgctcgag cgcctccttg tggtcggtcc ccgtccgggt
60
cgaagccagg ggcgcgcggc gatgtgagcc atgagcgcga cgtggacgct gtcgccggag
120
cccctgccgc cgtcgacggg gccccagtg ggcgcgggcc tggacgcgga gcagcgcacg
180
gtgttcgcct tcgtgctctg cctgctcgtg gtgctggtgc tgttgatggt gcgctgcgtg
240
cgcacacctg tcgacccta cagccgcagc cccgcctcgt cctggaccga ccacaaggag
300
gcgctcgagc gcgggcagtt cgactacgcg ttggtgtgag gggcgcggcg ccccctagg
359

<210> 3564
<211> 82
<212> PRT
<213> Homo sapiens

<400> 3564
Met Ser Ala Thr Trp Thr Leu Ser Pro Glu Pro Leu Pro Pro Ser Thr
1 5 10 15
Gly Pro Pro Val Gly Ala Gly Leu Asp Ala Glu Gln Arg Thr Val Phe
20 25 30
Ala Phe Val Leu Cys Leu Leu Val Val Leu Leu Leu Met Val Arg
35 40 45
Cys Val Arg Ile Leu Leu Asp Pro Tyr Ser Arg Met Pro Ala Ser Ser
50 55 60
Trp Thr Asp His Lys Glu Ala Leu Glu Arg Gly Gln Phe Asp Tyr Ala
65 70 75 80
Leu Val

<210> 3565
<211> 580
<212> DNA
<213> Homo sapiens

<400> 3565
acgcgtcgtg ggtgggaaaaa gggatgccag gacaccagaa gagcaatata aaacagctcc
60
cgtgagcagg cacaggagac cttccgcgcc gccggccggg cgaccccgca ggaagtagga
120
aggacgagcg cgcacttcaa gtcccagaag cccccgtttc ctggagcccg cgccgtgccg
180
cgctacgccc gccgggagcc gggcagagcg gccaaagtgt cgcagcccaa gaaaagaaa
240
cttgagtcgg ggggcggcgc cgaaggaggg gagggaaactg aagaggaaga tggcgcggag
300

cgggaggcgg ccctggagcg accccggacg actaagcggg aacgggacca gctgtactac
 360
 gagtgctact cggacgtttc ggtccacgag gagatgatcg cggaccgcgt ccgcaccgat
 420
 gcctaccgct gggtttccct tcggaactgg gcagcactgc gaggcaagac ggtactggac
 480
 gtgggcgcgg gcaccggcat tctgagcatc ttctgtgcc aggccggggc ccggcgcgctg
 540
 tacgcggtag aggccagcgc catctggcaa caggcccggg
 580

<210> 3566

<211> 193

<212> PRT

<213> Homo sapiens

<400> 3566

Thr	Arg	Arg	Gly	Trp	Glu	Lys	Gly	Cys	Gln	Asp	Thr	Arg	Arg	Ala	Ile
1				5					10					15	
Gln	Asn	Ser	Ser	Arg	Glu	Gln	Ala	Gln	Glu	Thr	Phe	Arg	Ala	Ala	Gly
			20					25					30		
Arg	Ala	Thr	Pro	Gln	Glu	Val	Gly	Arg	Thr	Ser	Ala	His	Phe	Lys	Ser
		35					40					45			
Gln	Lys	Pro	Pro	Phe	Pro	Gly	Ala	Arg	Ala	Val	Pro	Arg	Tyr	Ala	Arg
	50					55					60				
Arg	Glu	Pro	Gly	Arg	Ala	Ala	Lys	Met	Ser	Gln	Pro	Lys	Lys	Arg	Lys
65				70						75				80	
Leu	Glu	Ser	Gly	Gly	Gly	Ala	Glu	Gly	Gly	Glu	Gly	Thr	Glu	Glu	Glu
			85					90					95		
Asp	Gly	Ala	Glu	Arg	Glu	Ala	Ala	Leu	Glu	Arg	Pro	Arg	Thr	Thr	Lys
			100					105					110		
Arg	Glu	Arg	Asp	Gln	Leu	Tyr	Tyr	Glu	Cys	Tyr	Ser	Asp	Val	Ser	Val
			115				120					125			
His	Glu	Glu	Met	Ile	Ala	Asp	Arg	Val	Arg	Thr	Asp	Ala	Tyr	Arg	Trp
			130			135					140				
Val	Ser	Leu	Arg	Asn	Trp	Ala	Ala	Leu	Arg	Gly	Lys	Thr	Val	Leu	Asp
145				150						155				160	
Val	Gly	Ala	Gly	Thr	Gly	Ile	Leu	Ser	Ile	Phe	Cys	Ala	Gln	Ala	Gly
			165					170					175		
Ala	Arg	Arg	Val	Tyr	Ala	Val	Glu	Ala	Ser	Ala	Ile	Trp	Gln	Gln	Ala
			180					185					190		

Arg

<210> 3567

<211> 2811

<212> DNA

<213> Homo sapiens

<400> 3567

nngaagccga gctccgcgcc cagcaggaag aagaaacgag gaagcagcaa gaactcgaag
 60
 ccttgagaaa gagccagaag gaagctgaac tgaccctga actggagaaa cagaaggaaa
 120

ataagcaggt ggaagagatc ctccgtctgg agaaagaaat cgaggacctg cagcgcatga
180
aggagcagca ggagctgtcg ctgaccgagg cttccctgca gaagctgcag gagcggcggg
240
accaggagct ccgcaggctg gaggaggaga tttttgcacc tgaaaaagggc agccatagtt
300
ttccagaagc aactcagagg tcagattgct cggagagtgtt acagacaatt gctggcagag
360
aaaaggggagc aagaagaaaa gaagaaacag gaagaggaag aaaagaagaa acgggaggaa
420
gaagaaagag aaagagagag agagcgaaga gaagccgagc tccgcgcca gcaggaagaa
480
gaaacgagga agcagcaaga actcgaagcc ttgcagaaga gccagaagga agctgaactg
540
acccgtgaac tggagaaaca gaaggaaaat aagcaggtgg aagagatcct ccgtctggag
600
aaagaaatcg aggacctgca gcgcatgaag gagcagcagg agctgtcgct gaccgaggct
660
tccctgcaga agctgcagga gcggcgggac caggagctcc gcaggctgga ggaggaagcg
720
tgcagggcgg cccaggagtt cctcgagtcc ctcaatttcg acgagatcga cgagtgtgtc
780
cggaatatcg agcgggtccct gtcgggggga agcgaatttt ccagcgagct ggctgagagc
840
gcatgcgagg agaagcccaa cttcaacttc agccagccct acccagagga ggaggtcgat
900
gagggcttcg aagccgacga cgacgccttc aaggactccc ccaacccag cgagcacggc
960
cactcagacc agcgaacaag tggcatccgg accagcgatg actcttcaga ggaggacca
1020
tacatgaacg acacggtggg gccaccagc cccagtgcgg acagcacggg gctgctcgcc
1080
ccatcagtgc aggactccgg gagcctacac aactcctcca gcggcgagtc cacctactgc
1140
atgccccaga acgctgggga cttgccctcc ccagacggcg actacgacta cgaccaggat
1200
gactatgagg acggtgccat cacttcgggc agcagcgtga cttctccaa ctccctacggc
1260
agccagtggg ccccgacta ccgctgctct gtggggacct acaacagctc ggggtgcctac
1320
cggttcagct ctgagggggc gcagtcctcg tttgaagata gtgaagagga ctttgattcc
1380
aggtttgata cagatgatga gctttcatac cggcgtgact ctgtgtacag ctgtgtcact
1440
ctgccgtatt tccacagctt tctgtacatg aaaggtggcc tgatgaactc ttggaaacgc
1500
cgctgggtgc tcctcaagga tgaaaccttc ttgtgggtcc gctccaagca ggaggccctc
1560
aagcaaggct ggctcccaa aaaagggggg ggctcctcca cgctgtccag gagaaattgg
1620
aagaagcgct ggtttgcct ccgccagtcc aagctgatgt actttgaaaa cgacagcgag
1680
gagaagctca agggcaccgt agaagtgcga acggcaaaa agatcataga taacaccacc
1740

aaggagaatg ggatcgacat cattatggcc gataggactt tccacctgat tgcagagtcc
1800
ccagaagatg ccagccagtg gttcagcgtg ctgagtcagg tccacgcgtc cacggaccag
1860
gagatccagg agatgcatga tgagcaggca aaccacaga atgctgtggg caccttggat
1920
gtggggctga ttgattctgt gtgtgcctct gacagccctg atagacccaa ctcgtttgtg
1980
atcatcacgg ccaaccgggt gctgcactgc aacgccgaca cgccggagga gatgcaccac
2040
tggataaacc tgctgcagag gtccaaaggg gacaccagag tggagggcca ggaattcatc
2100
gtgagaggat ggttgcacaa agaggtgaag aacagtccaa agatgtcttc actgaaactg
2160
aagaaacggg ggtttgtact caccacaat tccctggatt actacaagag ttcagagaag
2220
aacgcgtca aactggggac cctggctctc aacagcctct gctctgtcgt cccccagat
2280
gagaagatat tcaaagagac aggctactgg aacgtcaccg tgtacgggcg caagcactgt
2340
taccggctct acaccaagct gctcaacgag gccaccgggt ggtccagtgt cagtcaaaac
2400
gtgactgaca ccaaggcccc gatcgacacc cccaccacgc agctgattca agatatcaag
2460
gagaactgcc tgaactcgga tgtggtggaa cagatttaca agcggaaacc gatccttcga
2520
tacacccatc accccttgca ctcccactc ctgccccttc cgtatgggga cataaatctc
2580
aacttgetca aagacaaagg ctataccacc cttcaggatg aggccatcaa gatattcaat
2640
tccctgcagc aactggagtc catgtctgac ccaattccaa taatccaggg catcctacag
2700
acagggcatg acctgcgacc tctgcgggac gagctgtact gccagcttat caaacagacc
2760
aacaaagtgc cccaccccg gagtgtgggc aacctgtaca gctggcagat c
2811

<210> 3568

<211> 869

<212> PRT

<213> Homo sapiens

<400> 3568

Pro	Arg	Leu	Pro	Cys	Arg	Ser	Cys	Arg	Ser	Gly	Gly	Thr	Arg	Ser	Ser
1				5					10					15	
Ala	Gly	Trp	Arg	Arg	Arg	Phe	Leu	His	Leu	Lys	Lys	Ala	Ala	Ile	Val
			20					25					30		
Phe	Gln	Lys	Gln	Leu	Arg	Gly	Gln	Ile	Ala	Arg	Arg	Val	Tyr	Arg	Gln
		35				40						45			
Leu	Leu	Ala	Glu	Lys	Arg	Glu	Gln	Glu	Glu	Lys	Lys	Lys	Gln	Glu	Glu
	50					55				60					
Glu	Glu	Lys	Lys	Lys	Arg	Glu	Glu	Glu	Glu	Arg	Glu	Arg	Glu	Arg	Glu
65					70					75				80	
Arg	Arg	Glu	Ala	Glu	Leu	Arg	Ala	Gln	Gln	Glu	Glu	Glu	Thr	Arg	Lys

BNSDOCID: <WO__0058473A2 | >

515 520 525
 Ile Ala Glu Ser Pro Glu Asp Ala Ser Gln Trp Phe Ser Val Leu Ser
 530 535 540
 Gln Val His Ala Ser Thr Asp Gln Glu Ile Gln Glu Met His Asp Glu
 545 550 555 560
 Gln Ala Asn Pro Gln Asn Ala Val Gly Thr Leu Asp Val Gly Leu Ile
 565 570 575
 Asp Ser Val Cys Ala Ser Asp Ser Pro Asp Arg Pro Asn Ser Phe Val
 580 585 590
 Ile Ile Thr Ala Asn Arg Val Leu His Cys Asn Ala Asp Thr Pro Glu
 595 600 605
 Glu Met His His Trp Ile Thr Leu Leu Gln Arg Ser Lys Gly Asp Thr
 610 615 620
 Arg Val Glu Gly Gln Glu Phe Ile Val Arg Gly Trp Leu His Lys Glu
 625 630 635 640
 Val Lys Asn Ser Pro Lys Met Ser Ser Leu Lys Leu Lys Lys Arg Trp
 645 650 655
 Phe Val Leu Thr His Asn Ser Leu Asp Tyr Tyr Lys Ser Ser Glu Lys
 660 665 670
 Asn Ala Leu Lys Leu Gly Thr Leu Val Leu Asn Ser Leu Cys Ser Val
 675 680 685
 Val Pro Pro Asp Glu Lys Ile Phe Lys Glu Thr Gly Tyr Trp Asn Val
 690 695 700
 Thr Val Tyr Gly Arg Lys His Cys Tyr Arg Leu Tyr Thr Lys Leu Leu
 705 710 715 720
 Asn Glu Ala Thr Arg Trp Ser Ser Val Ser Gln Asn Val Thr Asp Thr
 725 730 735
 Lys Ala Pro Ile Asp Thr Pro Thr Gln Gln Leu Ile Gln Asp Ile Lys
 740 745 750
 Glu Asn Cys Leu Asn Ser Asp Val Val Glu Gln Ile Tyr Lys Arg Asn
 755 760 765
 Pro Ile Leu Arg Tyr Thr His His Pro Leu His Ser Pro Leu Leu Pro
 770 775 780
 Leu Pro Tyr Gly Asp Ile Asn Leu Asn Leu Leu Lys Asp Lys Gly Tyr
 785 790 795 800
 Thr Thr Leu Gln Asp Glu Ala Ile Lys Ile Phe Asn Ser Leu Gln Gln
 805 810 815
 Leu Glu Ser Met Ser Asp Pro Ile Pro Ile Ile Gln Gly Ile Leu Gln
 820 825 830
 Thr Gly His Asp Leu Arg Pro Leu Arg Asp Glu Leu Tyr Cys Gln Leu
 835 840 845
 Ile Lys Gln Thr Asn Lys Val Pro His Pro Gly Ser Val Gly Asn Leu
 850 855 860
 Tyr Ser Trp Gln Ile
 865

<210> 3569

<211> 5070

<212> DNA

<213> Homo sapiens

<400> 3569

tctgaatccc cccccagcac cctcaatgcc cagatgctga atggaatgat caaacaggag
 60

cctgggaccg tgacagccct gcctctgcac ccactcagag ccccatcgcc accctggcct
120
ccccagggtc cgctctcccc gggccctggt tccttgccctc tcagcattgc ccgtgtccag
180
acaccgcctt ggcacccgcc aggtgcccc tcccaggcc tcctgcagga cagtgcagc
240
ctcagtggct cctacctgga ccccaactac cagtccatca agtggcagcc tcatcagcag
300
aacaagtggg cgaccctgta cgatgctaac tacaaggagc tgcccatgct cacctaccgc
360
gtggatgcgg acaagggtt caacttttcg gtgggcgacg acgcctttgt gtgccagaag
420
aagaaccact tccaggtgac agtgtacatc ggcattgctgg gcgagcccaa gtacgtcaag
480
acgcccaggg gcctcaagcc cctcgactgc ttctatctga agctgcacgg agtgaagctg
540
gaggccctga accagtccat taacatcgag cagtccagc cagaccggag caagcggccc
600
ttcaaccggg tcacggtcaa tctgccccct gagcaggtca cgaagggtgac tgtggggcgg
660
ctgcatttca gcgagaccac cgctaacaac atgcgtaaga agggcaagcc caaccggac
720
cagaggtact tcattgctggt ggtggccctc caggctcatg cacagaacca gaactacacg
780
ctggccgccc agatctcaga gcgcattcatt gtgcgggcct ccaaccagg ccagttcgag
840
agcgacagcg atgtgttggt gcagcgggca cagggtgccc acaccgtctt ccaccacggc
900
cgctgtggga tcaacacaga ccggccggat gaggcgctgg ttgtgcacgg gaatgtcaag
960
gtcatgggct cgcttatgca cccctccgac ctgcgcgcca aggaacacgt gcaggaggtg
1020
gacaccaccg agcaattgaa gaggatctcg cgcattgcggc tgggtgacta cagatacaag
1080
cccgagttcg ccgcccagcg gggcatcgag gccaccgcg cagagacagg tgtcatcgct
1140
caggaggtga aggagatctt gcctgaggct gtgaaagaca ccggagacat ggtctttgcc
1200
aatgggaaaa ccatagagaa cttcctggtg gtgaacaagg agcgcatctt catggagaac
1260
gtagggggccg tgaaggagct gtgcaagctg acagacaacc tggagacgag cattgatgag
1320
ctggagcgct ggagccacaa gctggccaag ctgcggcggc tcgacagcct caagtccacc
1380
ggcagctcgg gcgccttcag ccatgcaggg agccagttca gtcggggcggg cagcgtcccc
1440
cacaagaaga ggccccccaa ggtggccagc aagtcattgt ccgtgggttc ggaccaggcc
1500
tgcattcagc agcgcttctt gcagggaacc atcattgccc tgggtggtggt catggccttc
1560
agcgtggtgt ccatgtccac actgtacgtg ctgagcctgc gcacagagga ggacctggtg
1620
gacactgatg gctcttttgc cgtgtccact tcctgtctcc tggccctgct ccggccccag
1680

ccccctgggg ggagtgaggc cttgtgcca tggtecagcc agagctttgg gaccacgcag
1740
ctccgacagt cccccttgac cacggggcta ccaggcatac agccctcttt gctgctggtg
1800
accaccagcc tcaccagctc ggccccaggt tctgctgtcc gcaccttgga catgtgttcc
1860
agccacccct gccctgtcat ctgctgttcc tcaccacta ccaaccctac cactggctct
1920
agtcttg gcc ctagctttaa ccctggccat gttctcagcc caagtcccag cccagcacc
1980
aaccgctcag gccccagcca gatggccctt ctgccagtca ccaacatcag agccaagtcc
2040
tggggtcttt cagtcaatgg cattgaccac tccaagcatc acaagagtct ggagcctctg
2100
gccagccctg cagtcccctt ccctgggggg cagggcaaag ccaagaacag tcccagcctt
2160
ggtttccatg gccgggccc cggaggggccc ctccagtcca gcgtgggccc tgctgagccc
2220
acctgggccc agggccagtc agcctctctc cttgcagagc cagtgccctc cctgacctcc
2280
atccaggtgc tggagaattc gatgtccatc acctcccagt actgtgctcc aggggatgcc
2340
tgcaggcctg ggaacttcac ctaccacatc cctgtcagca gtggcacccc actgcacctc
2400
agcctgactc tgcagatgaa ctctctctcc cccgtgtctg tgggtgctgtg cagcctgagg
2460
tcaaaggagg aaccatgtga ggaggggagc cttccacaga gtctccacac ccaccaggac
2520
accaggga cctctcaccg gtggccaata accatcctgt ccttccgtga attcacctac
2580
cacttccggg tggcactgct gggtcaggcc aactgcagtt cagaggctct cggccagcca
2640
gccacagact accacttcca cttctaccgc ctgtgtgact gagctgccct cctgaggcag
2700
caccacacca gggaccaggg gtgcccaggc accccccaac actggatgca atgggtgttac
2760
actggagccc gctgcaggcc agctctgctg ttcactggcc ctaccgaga ctggtgaaac
2820
tggaagtctt cacactggag ttgctgttcc agctggctgc ccctcacggc acagagggaa
2880
cctgagagcc agagacttct tgggccttcc tgctgtccac cccctagggg ccaggacagg
2940
accagtttac ctctttccag atatggtggt tggagggtg gttcagggtc cctggaggga
3000
aggggaagcc tgtggccctg atttgttcag agccattct ccttgctc ccttttgag
3060
actggagcca acccttttgg agagaggacc tgcccacctt tgagatcagc agggggctcg
3120
gatccagccc taagagactt ggggtggacc ccatgagtca atggaggga gacggctctc
3180
ccccttaaag ctgttccctg ggggatggct tggtagtga cttcttgggg tttgcctgtt
3240
acgccagact cggacttcta agctttaagt gtggcccagg aggtttcttc tccctgggag
3300

ggcttggctc ccaagaagtc ccagggcagc cgaggccagc cctgcctggg ttggagaaac
3360
tgactttgtg ccttaagtct actcagtgcc tggatgaagcc accctcagcc cttcacaggc
3420
ctgaaccagt aggggcccagt gggccaggta agccctagag ccttgaacca ggaatatcca
3480
ggaagaggaa attccctttg agccccaga tggatattgca gcttcactgc ctgcgttcct
3540
gggagcgtct ggagctcaca gtgatcagt accacatcat tctctctgag cagaggagca
3600
ggaatccctc aagcagcagc ctggtccttg ctggtgggca gatgcaaata gcttttgctg
3660
ttattaatga agtaattact aaatgcactt aaaccagggc aggaaggaat ggaaggatgg
3720
agctagaaaag ctgagagtgg gccagagcag ggggtgtgaca cttgcaaaga cagggtctctg
3780
actctgatcc ctcccaggga gcctccgaca cccatccac tcccaaccac caagaccctg
3840
ggttagggaa gaagttgtat cttaagtgcc accttcaagt ttcttagtgg tgcttggtgc
3900
attccgaggc tacatccagg ctcatggaag gagtgtagta ttcatttagc catgtctgcc
3960
atgggtccag aaatgggaaa ggaattgct gtccttgccc tgtggtatgc tgccacctct
4020
ttgggaagca ggccttgccc ctgtcccacc actcattctc agctttgaat gggaggcctt
4080
tctatagtgg aggcctttcc ttgaagccta tgaactgcag gccccctttt gccattgatc
4140
tcaaagcact tgtcctcagg ataggggaaga gcagggggat gcaggaatag cagggatagc
4200
ttgtcccag cccctcccc aatttggttc cgttgacata ggaattttac gattcccaaa
4260
ccatgcaggg gctgagcctt ccttatgatg actttgttct ccctcccact gggggaatcc
4320
tccctatgcc ttaaaactgc cgagccccac tccatgtaat aggattcctg ggcttcctca
4380 atgttcttgg actgcgggcc ctgagtcctt aactggaaag tgaccgtcca 4440
ctgccccatg gagcccatct ggacacagca cagccccaaa accgttagca gctggctctg
4500
tttccaagcc tggggagggg ttcctcagtg caggagtggg ggacaggctg gggatccaag
4560
ctgcttgagg gggccaacct tggaccaaag ttgccttaag cctgtggtaa aagggttca
4620
gggaaggtaa gtgggccacc tgctggaagc tgccagctgc ccggctggca atggtgtgag
4680
tgtcttgccc ctgtccctgc cctggggctc agcaggtcat ccctcccttc ttctctctcc
4740
tttggcgttt gttcctgtag tcaactgggt aatctcccc tagcttcaag ctgtacatag
4800
ggcctcccag tgcaaatect cctgcccata ccgtgcaccc ttagaagcct gcgtgtgcat
4860
agagcgcccc ctacttccca gttaactccc agttcttctc cctgagcttg gtatttgtca
4920
tgtgccaact ctgactctga ggtgggcagt gaggggaagca gccccgggcc tgcttgcttc
4980

ctgtccccga aatgttcggt tcttctgaag taaatatata tatataaata aatgtataaa
 5040
 tactgctttg tatctgaaaa aaaaaaaaaa
 5070 .

<210> 3570
 <211> 893
 <212> PRT
 <213> Homo sapiens

<400> 3570
 Ser Glu Ser Pro Pro Ser Thr Leu Asn Ala Gln Met Leu Asn Gly Met
 1 5 10 15
 Ile Lys Gln Glu Pro Gly Thr Val Thr Ala Leu Pro Leu His Pro Thr
 20 25 30
 Arg Ala Pro Ser Pro Pro Trp Pro Pro Gln Gly Pro Leu Ser Pro Gly
 35 40 45
 Pro Gly Ser Leu Pro Leu Ser Ile Ala Arg Val Gln Thr Pro Pro Trp
 50 55 60
 His Pro Pro Gly Ala Pro Ser Pro Gly Leu Leu Gln Asp Ser Asp Ser
 65 70 75 80
 Leu Ser Gly Ser Tyr Leu Asp Pro Asn Tyr Gln Ser Ile Lys Trp Gln
 85 90 95
 Pro His Gln Gln Asn Lys Trp Ala Thr Leu Tyr Asp Ala Asn Tyr Lys
 100 105 110
 Glu Leu Pro Met Leu Thr Tyr Arg Val Asp Ala Asp Lys Gly Phe Asn
 115 120 125
 Phe Ser Val Gly Asp Asp Ala Phe Val Cys Gln Lys Lys Asn His Phe
 130 135 140
 Gln Val Thr Val Tyr Ile Gly Met Leu Gly Glu Pro Lys Tyr Val Lys
 145 150 155 160
 Thr Pro Glu Gly Leu Lys Pro Leu Asp Cys Phe Tyr Leu Lys Leu His
 165 170 175
 Gly Val Lys Leu Glu Ala Leu Asn Gln Ser Ile Asn Ile Glu Gln Ser
 180 185 190
 Gln Ser Asp Arg Ser Lys Arg Pro Phe Asn Pro Val Thr Val Asn Leu
 195 200 205
 Pro Pro Glu Gln Val Thr Lys Val Thr Val Gly Arg Leu His Phe Ser
 210 215 220
 Glu Thr Thr Ala Asn Asn Met Arg Lys Lys Gly Lys Pro Asn Pro Asp
 225 230 235 240
 Gln Arg Tyr Phe Met Leu Val Val Ala Leu Gln Ala His Ala Gln Asn
 245 250 255
 Gln Asn Tyr Thr Leu Ala Ala Gln Ile Ser Glu Arg Ile Ile Val Arg
 260 265 270
 Ala Ser Asn Pro Gly Gln Phe Glu Ser Asp Ser Asp Val Leu Trp Gln
 275 280 285
 Arg Ala Gln Val Pro Asp Thr Val Phe His His Gly Arg Val Gly Ile
 290 295 300
 Asn Thr Asp Arg Pro Asp Glu Ala Leu Val Val His Gly Asn Val Lys
 305 310 315 320
 Val Met Gly Ser Leu Met His Pro Ser Asp Leu Arg Ala Lys Glu His
 325 330 335
 Val Gln Glu Val Asp Thr Thr Glu Gln Leu Lys Arg Ile Ser Arg Met

```

      340      345      350
Arg Leu Val His Tyr Arg Tyr Lys Pro Glu Phe Ala Ala Ser Ala Gly
      355      360      365
Ile Glu Ala Thr Ala Pro Glu Thr Gly Val Ile Ala Gln Glu Val Lys
      370      375      380
Glu Ile Leu Pro Glu Ala Val Lys Asp Thr Gly Asp Met Val Phe Ala
385      390      395      400
Asn Gly Lys Thr Ile Glu Asn Phe Leu Val Val Asn Lys Glu Arg Ile
      405      410      415
Phe Met Glu Asn Val Gly Ala Val Lys Glu Leu Cys Lys Leu Thr Asp
      420      425      430
Asn Leu Glu Thr Arg Ile Asp Glu Leu Glu Arg Trp Ser His Lys Leu
      435      440      445
Ala Lys Leu Arg Arg Leu Asp Ser Leu Lys Ser Thr Gly Ser Ser Gly
      450      455      460
Ala Phe Ser His Ala Gly Ser Gln Phe Ser Arg Ala Gly Ser Val Pro
465      470      475      480
His Lys Lys Arg Pro Pro Lys Val Ala Ser Lys Ser Ser Ser Val Val
      485      490      495
Pro Asp Gln Ala Cys Ile Ser Gln Arg Phe Leu Gln Gly Thr Ile Ile
      500      505      510
Ala Leu Val Val Val Met Ala Phe Ser Val Val Ser Met Ser Thr Leu
      515      520      525
Tyr Val Leu Ser Leu Arg Thr Glu Glu Asp Leu Val Asp Thr Asp Gly
      530      535      540
Ser Phe Ala Val Ser Thr Ser Cys Leu Leu Ala Leu Leu Arg Pro Gln
545      550      555      560
Pro Pro Gly Gly Ser Glu Ala Leu Cys Pro Trp Ser Ser Gln Ser Phe
      565      570      575
Gly Thr Thr Gln Leu Arg Gln Ser Pro Leu Thr Thr Gly Leu Pro Gly
      580      585      590
Ile Gln Pro Ser Leu Leu Leu Val Thr Thr Ser Leu Thr Ser Ser Ala
      595      600      605
Pro Gly Ser Ala Val Arg Thr Leu Asp Met Cys Ser Ser His Pro Cys
      610      615      620
Pro Val Ile Cys Cys Ser Ser Pro Thr Thr Asn Pro Thr Thr Gly Pro
625      630      635      640
Ser Leu Gly Pro Ser Phe Asn Pro Gly His Val Leu Ser Pro Ser Pro
      645      650      655
Ser Pro Ser Thr Asn Arg Ser Gly Pro Ser Gln Met Ala Leu Leu Pro
      660      665      670
Val Thr Asn Ile Arg Ala Lys Ser Trp Gly Leu Ser Val Asn Gly Ile
      675      680      685
Asp His Ser Lys His His Lys Ser Leu Glu Pro Leu Ala Ser Pro Ala
      690      695      700
Val Pro Phe Pro Gly Gly Gln Gly Lys Ala Lys Asn Ser Pro Ser Leu
705      710      715      720
Gly Phe His Gly Arg Ala Arg Arg Gly Ala Leu Gln Ser Ser Val Gly
      725      730      735
Pro Ala Glu Pro Thr Trp Ala Gln Gly Gln Ser Ala Ser Leu Leu Ala
      740      745      750
Glu Pro Val Pro Ser Leu Thr Ser Ile Gln Val Leu Glu Asn Ser Met
      755      760      765
Ser Ile Thr Ser Gln Tyr Cys Ala Pro Gly Asp Ala Cys Arg Pro Gly

```

770		775		780	
Asn Phe Thr Tyr His Ile Pro Val Ser Ser Gly Thr Pro Leu His Leu					
785		790		795	800
Ser Leu Thr Leu Gln Met Asn Ser Ser Ser Pro Val Ser Val Val Leu					
	805		810		815
Cys Ser Leu Arg Ser Lys Glu Glu Pro Cys Glu Glu Gly Ser Leu Pro					
	820		825		830
Gln Ser Leu His Thr His Gln Asp Thr Gln Gly Thr Ser His Arg Trp					
	835		840		845
Pro Ile Thr Ile Leu Ser Phe Arg Glu Phe Thr Tyr His Phe Arg Val					
	850		855		860
Ala Leu Leu Gly Gln Ala Asn Cys Ser Ser Glu Ala Leu Ala Gln Pro					
865		870		875	880
Ala Thr Asp Tyr His Phe His Phe Tyr Arg Leu Cys Asp					
	885		890		

<210> 3571
 <211> 528
 <212> DNA
 <213> Homo sapiens

<400> 3571
 acgcgtcccc tgtccggcctt ggtatgggtc gcgctgctag cgctaggcca cgccttctctg
 60
 ttcaccgggg gcgtagtgag cgcctgggac caggtgtcct attttctctt cgtcatcttc
 120
 acggcgtatg ccatgctgcc cttgggcatg cgggaacgcc cgcgcgcggg cctcgcctcc
 180
 tcactctcgc atctgctggt cctcgggctg tatcttgggc cacagccgga ctcacggcct
 240
 gcactgctgc cgcaggtgag cacgcaagta gcacaggctg cgctcaggac ggctctgcca
 300
 cgtgctagta ggctcctttt agggggttgt tgagctgtga ctccaaggca aggtgcaacg
 360
 ctgggcgag gatacccaac cgtgctttcg cagagctggt acaacagtgt gatgcaatgc
 420
 ctgctgttac cagaagagg atccaggcca cacggaagg agtcgtgtcg tggtttaccc
 480
 cggggacaac agatgtggtt aatgaaacct tgacagagaa tgaaaaaa
 528

<210> 3572
 <211> 110
 <212> PRT
 <213> Homo sapiens

<400> 3572
 Thr Arg Pro Leu Ser Gly Leu Val Trp Val Ala Leu Leu Ala Leu Gly
 1 5 10 15
 His Ala Phe Leu Phe Thr Gly Gly Val Val Ser Ala Trp Asp Gln Val
 20 25 30
 Ser Tyr Phe Leu Phe Val Ile Phe Thr Ala Tyr Ala Met Leu Pro Leu
 35 40 45
 Gly Met Arg Asp Ala Ala Val Ala Gly Leu Ala Ser Ser Leu Ser His

50		55		60											
Leu	Leu	Val	Leu	Gly	Leu	Tyr	Leu	Gly	Pro	Gln	Pro	Asp	Ser	Arg	Pro
65			70					75						80	
Ala	Leu	Leu	Pro	Gln	Val	Ser	Thr	Gln	Val	Ala	Gln	Ala	Ala	Leu	Arg
			85					90						95	
Thr	Ala	Leu	Pro	Arg	Ala	Ser	Arg	Leu	Leu	Leu	Gly	Gly	Cys		
			100					105					110		

<210> 3573

<211> 1236

<212> DNA

<213> Homo sapiens

<400> 3573

```

ggggggggggg ttatcccttg tttgggacgg cggggctggt cttcataatg gggcattttc
60
tagccccaga ttaagggggc agttttcttcc tttccggcca ccagcgggca ggatcacccc
120
ccctgcctgc tccccaaagc ccagccttca gcccccccaa tcaatccag ccacacacac
180
agtcccattht tttccatcca ttctgggtact tgtgtgttca ataaacctgg tggacacaca
240
gcttcacata cccacacact cacagccaca aaccccagaa gtcattgcaca tgccgacgca
300
ccttggtggc catgcacaca caaccacact tgtgtgcaaa gtggcagaca caccacaca
360
tgcatagaag caagtctctg gaccccttct gcatccaca gagggggctc ccctgctgtg
420
tttgattggt tcttcgaagc ggctgcccct gcctccgtgc aggaggatcc ccccatcctg
480
cggcagttcc ctccagactt caggggaccag gaagctatgc agatgggtgcc taaattctgc
540
ttcccttttg atgtggaaag ggggcccccc agccccgccg tgcagcattt caccttcgcc
600
ctcacagacc ttgccggcaa ccgcagattt ggtttctgcc gcctgcgggc gggtagccag
660
agctgtctct gtatcctcag ccacctgect tggttcgagg tgttttaca gctattgaac
720
acagtgggag acctcctagc ccaggaccaa gtcaccgagg cagaggaact tcttcaaaat
780
ctgtttcagc agtccctgtc tgggccccag gcctcagtgg ggcttgagct gggcagcgga
840
gtgacgggtc ccagcgggca gggatatcca cccctaccc gggggaatag caagccgctt
900
tcctgcttcg tggccccgga ctccggccgc ctgccatcca tccctgagaa caggaaaccta
960
acggagctgg tgggtggccgt gactgacgag aacatcgtgg ggctgttcgc ggcgtcctg
1020
gccgagagaa gactcctgct caccgccagc aaactcagca cctgagggcg gggtagccgc
1080
ggccgggggtg ggagcagggc ctggctccgc cccggggggc gggacaaggg ggctgattcc
1140
ttgctctaac cctactgcgc gagacccgag ggcgaagtcc tggccccgcc ccttcgaagg
1200

```

tctttgagag tttaactctn gccccgcct cttggg
1236

<210> 3574

<211> 361

<212> PRT

<213> Homo sapiens

<400> 3574

Pro	Gln	Ile	Lys	Gly	Ala	Val	Ser	Phe	Phe	Pro	Ala	Thr	Ser	Gly	Gln
1				5					10					15	
Asp	His	Pro	Pro	Cys	Leu	Leu	Pro	Lys	Ala	Gln	Pro	Ser	Ala	Pro	Pro
			20					25					30		
Ile	Asn	Pro	Ser	His	Thr	His	Ser	Pro	Ile	Phe	Ser	Ile	His	Ser	Gly
			35				40					45			
Thr	Cys	Val	Phe	Asn	Lys	Pro	Gly	Gly	His	Thr	Ala	Ser	His	Thr	His
			50			55					60				
Thr	Leu	Thr	Ala	Thr	Asn	Pro	Arg	Ser	His	Ala	His	Ala	Asp	Ala	Pro
65					70					75				80	
Cys	Gly	Thr	Cys	Thr	His	Asn	His	Thr	Cys	Val	Gln	Ser	Gly	Arg	His
				85				90					95		
Thr	His	Thr	Cys	Ile	Glu	Ala	Ser	Leu	Trp	Thr	Pro	Ser	Ala	Ser	His
			100					105					110		
Arg	Gly	Gly	Ser	Pro	Ala	Val	Phe	Asp	Trp	Phe	Phe	Glu	Ala	Ala	Cys
			115				120					125			
Pro	Ala	Ser	Val	Gln	Glu	Asp	Pro	Pro	Ile	Leu	Arg	Gln	Phe	Pro	Pro
			130			135					140				
Asp	Phe	Arg	Asp	Gln	Glu	Ala	Met	Gln	Met	Val	Pro	Lys	Phe	Cys	Phe
145					150					155				160	
Pro	Phe	Asp	Val	Glu	Arg	Gly	Pro	Pro	Ser	Pro	Ala	Val	Gln	His	Phe
				165					170					175	
Thr	Phe	Ala	Leu	Thr	Asp	Leu	Ala	Gly	Asn	Arg	Arg	Phe	Gly	Phe	Cys
			180					185					190		
Arg	Leu	Arg	Ala	Gly	Thr	Gln	Ser	Cys	Leu	Cys	Ile	Leu	Ser	His	Leu
			195				200					205			
Pro	Trp	Phe	Glu	Val	Phe	Tyr	Lys	Leu	Leu	Asn	Thr	Val	Gly	Asp	Leu
	210					215					220				
Leu	Ala	Gln	Asp	Gln	Val	Thr	Glu	Ala	Glu	Glu	Leu	Leu	Gln	Asn	Leu
225					230					235				240	
Phe	Gln	Gln	Ser	Leu	Ser	Gly	Pro	Gln	Ala	Ser	Val	Gly	Leu	Glu	Leu
				245					250					255	
Gly	Ser	Gly	Val	Thr	Val	Ser	Ser	Gly	Gln	Gly	Ile	Pro	Pro	Pro	Thr
			260					265					270		
Arg	Gly	Asn	Ser	Lys	Pro	Leu	Ser	Cys	Phe	Val	Ala	Pro	Asp	Ser	Gly
			275					280					285		
Arg	Leu	Pro	Ser	Ile	Pro	Glu	Asn	Arg	Asn	Leu	Thr	Glu	Leu	Val	Val
	290					295					300				
Ala	Val	Thr	Asp	Glu	Asn	Ile	Val	Gly	Leu	Phe	Ala	Ala	Leu	Leu	Ala
305					310					315				320	
Glu	Arg	Arg	Val	Leu	Leu	Thr	Ala	Ser	Lys	Leu	Ser	Thr	Leu	Arg	Arg
				325					330					335	
Gly	Pro	Pro	Gly	Arg	Gly	Gly	Ser	Arg	Ala	Trp	Leu	Arg	Pro	Gly	Gly
			340					345					350		
Arg	Asp	Lys	Gly	Ala	Asp	Ser	Leu	Leu							

355

360

<210> 3575

<211> 769

<212> DNA

<213> Homo sapiens

<400> 3575

tgatcagctc ctgtcggagt tcatcggcca tgaagaagga aggtgcgttt gctttcggtt
 60
 gcatataagc aacgtgaggt gcagttggag gataaatatg atagtttggga aacaccattc
 120
 cagtcaaagg tgctggagtt gtgtctgtat agaagtaagt cgtcccacca acagtttcct
 180
 tttggatcac ctgaccagaa gacggagtct gagaaacagg attattaaca gatgtagagg
 240
 cactagaagg caccatgtaa cttgctggat ttggagtgtg acttcttctt ctgggagcag
 300
 gagaagtatg tggagtaatc ttgggggaat gaagagggga agaccagca gacaacgaca
 360
 ttctgaaga ggatgtaaaa atgtttctta atggagcaat aattggtttt agagaacaag
 420
 tctggaaaat aaaatgcaaa cattcatttg gaagaaacat catctttggg atcgtaagtg
 480
 caaagatgaa ggaaataatt ttatcttggt ttgttgtaga aaaagctctg attaaagcaa
 540
 atgtaaagtt tcttttttca aatgtactta ttccaaata tgtagcaga tttactgcaa
 600
 gaatagtctc ctccatatca aggtttacat caggaaattt aatagcaaga gtgaccaaaa
 660
 atttaataaa ttaatggaag agtgggaagt aacagaattg tggctcttta taaaattatg
 720
 ccttttataa aagtttttct ttataaaaag gcataattcc ttttttatt
 769

<210> 3576

<211> 205

<212> PRT

<213> Homo sapiens

<400> 3576

Met	Glu	Glu	Thr	Ile	Leu	Ala	Val	Asn	Leu	Leu	Thr	Tyr	Leu	Glu	Ile
1				5					10					15	
Ser	Thr	Phe	Glu	Lys	Arg	Asn	Phe	Thr	Phe	Ala	Leu	Ile	Arg	Ala	Phe
			20					25					30		
Ser	Thr	Thr	Lys	Gln	Asp	Lys	Ile	Ile	Ser	Phe	Ile	Phe	Ala	Leu	Thr
			35				40					45			
Ile	Pro	Lys	Met	Met	Phe	Leu	Pro	Asn	Glu	Cys	Leu	His	Phe	Ile	Phe
	50					55					60				
Gln	Thr	Cys	Ser	Leu	Lys	Pro	Ile	Ile	Ala	Pro	Leu	Arg	Asn	Ile	Phe
65					70					75				80	
Thr	Ser	Ser	Ser	Gly	Met	Ser	Leu	Ser	Ala	Gly	Ser	Ser	Pro	Leu	His
				85					90					95	
Ser	Pro	Lys	Ile	Thr	Pro	His	Thr	Ser	Pro	Ala	Pro	Arg	Arg	Arg	Ser

<400>	3577				
gtcgcactcca	ttcggcgctca	gtttgagttc	agtgtggact	ctttccaaat	catcctggat
60					
tctttgcttt	tcttctatga	ctgttccaat	aatcccattt	ctgagcactt	ccaccccacc
120					
gtgattgggg	agagcatgta	cggggacttt	gaggaagctt	ttgaccatct	gcagaacaga
180					
ctgatcgcca	ccaagaaccc	agaagaaatc	agaggcgggg	gactttctcaa	gtacagcaac
240					
cttcttgtgc	gggacttcag	gcccacagac	caggaagaaa	tcaaaaactct	agagcgctac
300					
atgtgctcca	ggttcttcat	cgacttcccc	gacatccttg	aacagcagag	gaagttggag
360					
acttaccttc	aaaaccactt	cgctgaagaa	gagagaagca	agtacgacta	cctcatgata
420					
cttcgcaggg	tggatgaacga	gagcaccgtg	tgtctcatgg	ggcatgaacg	caggcagact
480					
ctgaacctca	tctccctcct	ggccttgctg	gtgctgggcg	gaacaaaaca	tcatccccc
540					
gtgccaccaa	ggtcacctgt	tactaccagc	ggtcccctta	gtcagtgatg	gcaacttcag
600					
caactactac	gttgcccatc	ctccagtcac	ctacagccag	ccttaccccta	cctggctgcc
660					
ctgtaactaa	ccttgagacc	tgaggggttc	cacagtggga	accccaatag	ggctagggct
720					
ctcaggtagg	ggagctcctt	ctagatgtag	gcatttgact	tttaaagggg	aactcagctc
780					
tgattctgct	tttttttttt	tttttccttt	gtgtacccat	tggaatgggt	ctacagtgt
840					
tcatgagcca	accctcaaag	gaccggtatt	acagtgccac	gttggaaaac	gctacaggaa
900					
gcatgaccta	tccacatctt	tccaagatag	acactaacat	gtcatgtccc	aaacatttagc
960					
acgtgggggt	tgagctctgt	gcagtaatcg	agattgggag	aatttgggca	gcgcgtgaga
1020					

agtgctaagc tacttgtttt ctcacttgag cccgggtagg ctgtgttggc cctcacttgg
 1080
 gattctcagc agttacatga aagttgtgct gataatctct tctcttgtag caatttttagt
 1140
 caggcagaaa atggtaaaca tgagggtgct cttgtgactt aatttttgtt caagggacta
 1200
 agttgcttat gtttattccc tgtca
 1225

<210> 3578
 <211> 195
 <212> PRT
 <213> Homo sapiens

<400> 3578
 Val Asp Ser Ile Arg Arg Gln Phe Glu Phe Ser Val Asp Ser Phe Gln
 1 5 10 15
 Ile Ile Leu Asp Ser Leu Leu Phe Phe Tyr Asp Cys Ser Asn Asn Pro
 20 25 30
 Ile Ser Glu His Phe His Pro Thr Val Ile Gly Glu Ser Met Tyr Gly
 35 40 45
 Asp Phe Glu Glu Ala Phe Asp His Leu Gln Asn Arg Leu Ile Ala Thr
 50 55 60
 Lys Asn Pro Glu Glu Ile Arg Gly Gly Gly Leu Leu Lys Tyr Ser Asn
 65 70 75 80
 Leu Leu Val Arg Asp Phe Arg Pro Thr Asp Gln Glu Glu Ile Lys Thr
 85 90 95
 Leu Glu Arg Tyr Met Cys Ser Arg Phe Phe Ile Asp Phe Pro Asp Ile
 100 105 110
 Leu Glu Gln Gln Arg Lys Leu Glu Thr Tyr Leu Gln Asn His Phe Ala
 115 120 125
 Glu Glu Glu Arg Ser Lys Tyr Asp Tyr Leu Met Ile Leu Arg Arg Val
 130 135 140
 Val Asn Glu Ser Thr Val Cys Leu Met Gly His Glu Arg Arg Gln Thr
 145 150 155 160
 Leu Asn Leu Ile Ser Leu Leu Ala Leu Arg Val Leu Gly Gly Thr Lys
 165 170 175
 His His Pro Pro Val Pro Pro Arg Ser Pro Val Thr Thr Ser Gly Pro
 180 185 190
 Leu Ser Gln
 195

<210> 3579
 <211> 755
 <212> DNA
 <213> Homo sapiens

<400> 3579
 acgcgtgatg tcaactgagaa tgtttgctca cagtcaataa ttgtctttgt ggatgtgata
 60
 attttggaga tacacttctg gtcagaactc aggtgagata atcttgcaat actccaaatg
 120
 cagatactcc agccacccgc aaggttccag gaaaggacaa tgcctgcga gaaaatcagg
 180

aggcctccac ttcttgggcc acttgagaag ttcttgggca tgtcactaca tgttggttga
 240
 ctcagccatt tctcatgctg ttttgtttct tgcggtggcc acttaacccc aaagaatgaa
 300
 gggaggatcc acagtgaaag tgcctgagtt tctctatgag accagatgct gtcgaaacca
 360
 aacatctttt cctttgctct atgggaacat tttagggttt gttttgcaca gctggtttcc
 420
 agactagaag attaacaagt ttgggtccac ccctaagaat cagtggctgt cttttaaggt
 480
 gaggagtgtg ggcttaactg aggtcctttg agggagctat aaaggagaaa caacctggga
 540
 catcccagtt ttctatttcc tccactgtta atatctcatc taaaataatt catgagttaa
 600
 aatggtaaata atatgcttta agctctacct ttaaacttgt atgttattca ggcattctct
 660
 attaagatac tgggtctctg gatacccaag gaaatgttgg ctttttattc ttatgtgggt
 720
 ccaaatttac ttctcttcag tttaattgtc catgg
 755

<210> 3580

<211> 121

<212> PRT

<213> Homo sapiens

<400> 3580

Met	Phe	Gly	Phe	Asp	Ser	Ile	Trp	Ser	His	Arg	Glu	Thr	Gln	Ala	Leu
1				5					10					15	
Ser	Leu	Trp	Ile	Leu	Pro	Ser	Phe	Phe	Gly	Val	Lys	Trp	Pro	Pro	Gln
			20					25					30		
Glu	Thr	Lys	Gln	His	Glu	Lys	Trp	Leu	Ser	Gln	Pro	Thr	Cys	Ser	Asp
		35					40					45			
Met	Pro	Arg	Asn	Phe	Ser	Ser	Gly	Pro	Gly	Ser	Gly	Gly	Leu	Leu	Ile
		50				55					60				
Phe	Ser	Gln	Asp	Ile	Val	Leu	Ser	Trp	Asn	Leu	Ala	Gly	Gly	Trp	Ser
65				70					75					80	
Ile	Cys	Ile	Trp	Ser	Ile	Ala	Arg	Leu	Ser	His	Leu	Ser	Ser	Asp	Gln
			85						90					95	
Lys	Cys	Ile	Ser	Lys	Ile	Ile	Thr	Ser	Thr	Lys	Thr	Ile	Ile	Asp	Cys
			100					105						110	
Glu	Gln	Thr	Phe	Ser	Val	Thr	Ser	Arg							
		115					120								

<210> 3581

<211> 2132

<212> DNA

<213> Homo sapiens

<400> 3581

nnggcgcccc ggcggtgctg cgctgccaga gcccgcgcat ggtgtggacc caggaccggc
 60
 tgcacgaccg ccagcgctg ctccactggg acctgcgagg ccccgggggg ggccccgcgc
 120

ggcgctgct ggacttgtac tcggcgggcg agcagcgct gtacgaggcg cgggaccgcg
180
gccgcctgga gctctcgcc tcggccttcg acgacggcaa cttctcgctg ctcatccgcg
240
cgggtggagga gacggacgcg gggctgtaca cctgcaacct gcaccatcac tactgccacc
300
tctacgagag cctggccgctc cgcttgagg tcaccgacgg cccccggcc acccccgct
360
actgggacgg cgagaaggag gtgctggcg tggcgcgcg cgaccccgcg cttctgacct
420
gcgtgaaccg cgggcacgtg tggaccgacc ggcacgtgga ggaggctcaa cagggtggtgc
480
actgggaccg gcagccgcc ggggtccgc acgaccgcg ggaccgctg ctggacctct
540
acgcgtcggg cgagcgccg gcctacggg cccttttct gcgcgaccg gtggctgtgg
600
gcgcggatgc ctttgagcgc ggtgacttct cactgcgtat cgagccgctg gaggtcgccg
660
acgagggcac ctactcctgc cacctgcacc accattactg tggcctgcac gaacgccgcg
720
tcttccacct gacggtcgcc gaacccacg cggagccgcc cccccggggc tctccgggca
780
acggctccag ccacagcgcc gcccaggcc cagacccac actggcgcg gccacaacg
840
tcataaatgt catcgcccc gagagccgag ccacttctt ccagcagctg ggctacgtgc
900
tggccacgct gctgctcttc atcctgctac tggtcactgt cctcctggcc gcccgaggc
960
gccgaggagg ctacgaatac tcggaccaga agtcgggaaa gtcaaagggg aaggatgtta
1020
acttggcgga gttcgctgtg gctgcaggg accagatgct ttacaggagt gaggacatcc
1080
agctagatta caaaaacaac atcctgaagg agagggcgga gctggcccac agccccctgc
1140
ctgccaahta catcgacct gacaaaggg tccggaagga gaactgcaaa tagggaggcc
1200
ctgggctcct ggctgggcca gcagctgcac ctctcctgtc tgtgctctc ggggcatctc
1260
ctgatgctcc ggggctcacc ccccttcag cggttggtcc cgcttctctg gaatttggtc
1320
tgggcgtatg cagaggccgc ctccacacc ctccccagg ggcttggtgg cagcatagcc
1380
ccaccctg cggccttgc tcacgggtgg ccctgccac ccctggcaca accaaaatcc
1440
cactgatgcc catcatgcc tcagaccctt ctgggctctg ccgctgggg gctgaagac
1500
attcctggag gacactccca tcagaacctg gcagcccaa aactggggtc agcctcaggg
1560
caggatccc actcctccag ggctctgtc gtccggggct gggagatgtt cctggaggag
1620
gacactccca tcagaacttg gcagccttga agttggggtc agcctcgga ggagtccac
1680
tcctcctggg gtgctgcctg ccaccaagag ctccccacc tgtaccacca tgtgggactc
1740

caggcaccat ctgttctccc cagggacctg ctgacttgaa tgccagccct tgctcctctg
 1800
 tgttgctttg ggccacctgg ggctgcaccc cctgcccttt ctctgcccc tccctaccct
 1860
 agccttgctc tcagccacct tgatagtcac tgggctccct gtgacttctg accctgacac
 1920
 ccctcccttg gactctgcct gggctggagt ctagggctgg ggctacattt ggcttctgta
 1980
 ctggctgagg acaggggagg gagtgaagtt ggtttggggg ggctgtgtt gccactctca
 2040
 gcaccccaca tttgcatctg ctgggtggacc tgccaccatc acaataaagt ccccatctga
 2100
 tttttaaaaa aaaaaaaaaa aaaaaaaaaa aa
 2132

<210> 3582
 <211> 138
 <212> PRT
 <213> Homo sapiens

<400> 3582
 Xaa Ala Pro Gly Arg Cys Cys Ala Ala Arg Ala Arg Ala Trp Cys Gly
 1 5 10 15
 Pro Arg Thr Gly Cys Thr Thr Ala Ser Ala Cys Ser Thr Gly Thr Cys
 20 25 30
 Ala Ala Pro Gly Val Ala Pro Arg Gly Ala Cys Trp Thr Cys Thr Arg
 35 40 45
 Arg Ala Ser Ser Ala Cys Thr Arg Arg Gly Thr Ala Ala Ala Trp Ser
 50 55 60
 Ser Arg Pro Arg Pro Ser Thr Thr Ala Thr Ser Arg Cys Ser Ser Ala
 65 70 75 80
 Arg Trp Arg Arg Arg Thr Arg Gly Cys Thr Pro Ala Thr Cys Thr Ile
 85 90 95
 Thr Thr Ala Thr Ser Thr Arg Ala Trp Pro Ser Ala Trp Arg Ser Pro
 100 105 110
 Thr Ala Pro Arg Pro Pro Pro Thr Gly Thr Ala Arg Arg Arg Cys
 115 120 125
 Trp Arg Trp Arg Ala Ala His Pro Arg Phe
 130 135

<210> 3583
 <211> 1554
 <212> DNA
 <213> Homo sapiens

<400> 3583
 tcattgagggg agagaatggc gccattttgc ggtacggaag ctacacagca acacgtatag
 60
 gagactctcc ccgagatctt ctaggaggatg acccatctat ttttgtttgg gaagaggaaa
 120
 ctccgaaatg ggatcgcgga agacttaaag ggccaggctg attttttttt cctactgcag
 180
 gtctctgagg ctgtgggtgc tacagggtca ccacgagctt ggcttacttg tctcatcctt
 240

cccttgccctg gtatcatttt ctcagttctc ccaaaagcca tgtcccggcc cttgctcatc
300
accttcaccc cagccactga ccccgacgac ctctggaagg atgggcagca gcagccacag
360
cccgagaagc cagagtccac cctggatggg gctgcagccc gagctttcta tgaggccctg
420
attggggatg agagcagcgc tcctgactcc cagagatctc agactgaacc tgccagagaa
480
agaaagagaa agaaaagaag aataatgaag gcaccagcag cagaagcagt ggcagaagga
540
gcatacaggaa gacatggaca agggagatcc cttgaggctg aggataagat gactcaccgg
600
atactgaggg cagcccagga gggggacctg ccagaactta ggagactgct ggaaccgcat
660
gaggcaggag gagctggggg gaatatcaac gcccgggatg ctttctggtg gacccactg
720
atgtgtgctg ctcgagcggg ccagggggca gctgtgagct atctcctggg ccgtggggct
780
gcctgggtgg ggggtctgtga gctgagtggc agggatgcgg ctcagctcgc tgaagaagct
840
ggcttccctg aggtagcccg catggtcagg gagagccatg gagagacaag gagcccggaa
900
aaccggtctc ctactccctc cctccagtac tgcgagaact gtgacacca cttccaagat
960
tccaaccacc gcacatccac tgctcacctg ctgtcactgt cgcagggctc tcagcctccc
1020
aaccttccac ttggggtgcc catctccagc ccgggcttca aactgctgct gggggggggc
1080
tgaggagccag gaatggggct gggaccccg ggtgaggggc gtgccaatcc catccccact
1140
gtcctcaaga gggaccagga aggactaggc tacagatcag caccacagcc ccgagtgaca
1200
catttcccag cttgggatac ccgagctgtg gctgggaggg agagaccccc tcgggtggcc
1260
acactgagct ggaggagga gagaaggagg gaggagaaag acagggcttg ggagcgggat
1320
ctaaggactt acatgaacct cgagttctga ctttggtaaa gtctgacct agtctgctgc
1380
tgaagtctga acttgggcct ctgacctggg ccctttgact tccccttctt gggatctgct
1440
cagatgcaga tcctgaagtt tttggtcaat aggctctgtc ttcgtgagag acgggctgag
1500
agtcagaaat aaatcaacca tttgtggttt aaaaaaaaaa aaaaacaaag tttt
1554

<210> 3584

<211> 356

<212> PRT

<213> Homo sapiens

<400> 3584

Met Ser Arg Pro Leu Leu Ile Thr Phe Thr Pro Ala Thr Asp Pro Ser
1 5 10 15
Asp Leu Trp Lys Asp Gly Gln Gln Gln Pro Gln Pro Glu Lys Pro Glu

```
<210> 3585
<211> 2782
<212> DNA
<213> Homo sapiens
```

```
<400> 3585
n g c a c g c g c   a g t c g t a t c c   g t g t g a t g g g   c g g g c t g t t g   a c g g c g c t g c   g a t g g c t g c c
60
t g c g a g g g c a   g g a g a a g c g g   a g c t c t c g g t   t c c t c t c a g t   c g g a c t t c c t   g a c g c c g c c a
120
```

gtgggcgggg ccccttgggc cgtcgccacc actgtagtca tgtaccacc gccgcgcgcg
180
ccgcctcatc gggacttcat ctcggtgacg ctgagctttg gcgagagcta tgacaacagc
240
aagagttggc ggcggcgctc gtgctggagg aaatggaagc aactgtcgag attgcagcgg
300
aatatgattc tcttctctct tgcctttctg cttttctgtg gactcctctt ctacatcaac
360
ttggctgacc attggaaagc tctggctttc aggctagagg aagagcagaa gatgaggcca
420
gaaattgctg ggtaaaaacc agcaaatcca cccgtcttac cagctcctca gaaggcggac
480
accgaccctg agaacttacc tgagatttcg tcacagaaga cacaaagaca catccagcgg
540
ggaccacctc acctgcagat tagaccccca agccaagacc tgaaggatgg gaccacaggag
600
gaggccacaa aaaggcaaga agcccctgtg gatccccgcc cggaaggaga tccgcagagg
660
acagtcatca gctggagggg agcggtgatc gagcctgagc agggcaccga gctcccttca
720
agaagagcag aagtgcctac caagcctccc ctgccaccgg ccaggacaca gggcacacca
780
gtgcatctga actatcgcca gaaggcgctg attgacgtct tctgcatgc atggaaagga
840
taccgcaagt ttgcatgggg ccatgacgag ctgaagcctg tgtccaggtc cttcagttag
900
tggtttggcc tgggtctcac actgatcgac gcgctggaca ccatgtggat cttgggtctg
960
aggaaagaat ttgaggaagc caggaaagtgg gtgtcgaaga agttacactt tgaaaaggac
1020
gtggacgtca acctgtttga gagcacgac cgcctcctgg gggggctcct gagtgcctac
1080
cacctgtctg gggacagcct cttcctgagg aaagctgagg attttggaat tgggctaattg
1140
cctgccttca gaacaccatc caagattcct tactcggatg tgaacatcgg tactggagtt
1200
gcccaccgc cacggtggac ctccgacagc actgtggccg aggtgaccag cattcagctg
1260
gagttccggg agctctcccg tctcacaggg gataagaagt ttcaggaggc agtggagaag
1320
gtgacacagc acatccacgg cctgtctggg aagaaggatg ggctggtgcc catgttcac
1380
aataccaca gtggcctctt caccacctg ggcgtattca cgctgggcgc cagggccgac
1440
agctactatg agtacctgct gaagcagtgg atccagggcg ggaagcagga gacacagctg
1500
ctggaagact acgtggaagc catcgagggt gtcagaacgc acctgctgcg gcactccgag
1560
cccagtaagc tcacctttgt gggggagctt gcccacggcc gcttcagtgc caagatggac
1620
cacctggtgt gcttctgccc agggacgctg gctctgggcg tctaccacgg cctgcccgcc
1680
agccacatgg agctggccca ggagctcatg gagacttgtt accagatgaa ccggcagatg
1740

gagacggggc tgagtcccgga gatcgtgcac ttcaaccttt acccccagcc gggccgtcgg
 1800
 gacgtggagg tcaagccagc agacaggcac aacctgctgc ggccagagac cgtggagagc
 1860
 ctgttctacc tgtaccgct cacaggggac cgcaaatacc aggactgggg ctgggagatt
 1920
 ctgcagagct tcagccgatt cacacgggtc ccctcgggtg gctattcttc catcaacaat
 1980
 gtccaggatc ctcagaagcc cgagcctagg gacaagatgg agagcttctt cctgggggag
 2040
 acgtcaagt atctgttctt gctcttctcc gatgacccaa acctgctcag cctggacgcc
 2100
 tacgtgttca acaccgaagc ccaccctctg cctatctgga ccctgccta ggggtggatgg
 2160
 ctgctggtgt ggggacttcg ggtgggcaga ggcaccttgc tgggtctgtg gcattttcca
 2220
 agggcccacg tagcaccggc aaccgccaag tggcccaggc tctgaactgg ctctgggctc
 2280
 ctctctgtct ctgctttaat caggacaccg tgaggacaag tgaggccgtc agtcttgggtg
 2340
 tgatgcgggg tgggctgggc cgctggagcc tccgcctgct tcctccagaa gacacgaatc
 2400
 atgactcacg attgctgaag cctgagcagg tctctgtggg ccgaccagag gggggcttcg
 2460
 aggtggtccc tggtactggg gtgaccgagt ggacagccca ggtgacgct ctgcccgggc
 2520
 tcgtgaagcc tcagatgtcc ccaatccaag ggtctggagg ggctgccgtg actccagagg
 2580
 cctgaggctc cagggtggc tctgggtgtt acaagctgga ctcagggatc ctctggccg
 2640
 ccccgagggg ggcttggagg gctggacggc aagtccgtct agctcacggg cccctccagt
 2700
 ggaatgggtc ttttcggtgg agataaaagt tgatttgctc taaaaaaaaa aaaaaaaaaa
 2760
 aaaaaaaaaa aaaaaaaaaa aa
 2782

<210> 3586

<211> 663

<212> PRT

<213> Homo sapiens

<400> 3586

Met	Tyr	Pro	Pro	Pro	Pro	Pro	Pro	Pro	His	Arg	Asp	Phe	Ile	Ser	Val
1				5					10					15	
Thr	Leu	Ser	Phe	Gly	Glu	Ser	Tyr	Asp	Asn	Ser	Lys	Ser	Trp	Arg	Arg
			20					25					30		
Arg	Ser	Cys	Trp	Arg	Lys	Trp	Lys	Gln	Leu	Ser	Arg	Leu	Gln	Arg	Asn
		35				40					45				
Met	Ile	Leu	Phe	Leu	Leu	Ala	Phe	Leu	Leu	Phe	Cys	Gly	Leu	Leu	Phe
	50					55					60				
Tyr	Ile	Asn	Leu	Ala	Asp	His	Trp	Lys	Ala	Leu	Ala	Phe	Arg	Leu	Glu
65				70					75					80	
Glu	Glu	Gln	Lys	Met	Arg	Pro	Glu	Ile	Ala	Gly	Leu	Lys	Pro	Ala	Asn

2746


```

<400> 3587
nctttttttt ttttttttga gtgtgggggtc agttttattgg gcatgcgtca gtcagaggct
60
gggctggcca gggtcgggta gggcagcagt ttgtctggac cccgagaaac ccaactggaa
120
tccagggcct catctgcttc aaagccaaag tcttctctcaa ccttaatctg caccggggcc
180
agctctggag tcagcgcatt tcctgctcgg cgtccatccc gtggcactcg ccgcctcttc
240
cgcccactgg gccccctcacc gggggctggg ctgccggggt ctgggggtgc aggagtcctt
300
ctgggcgggg acagtgtctc tttctctgga ggctcattct ccgcattgcc tgggggtgggg
360
gcatccgtgc cctggctgcc ctcatcctcc agcacaatgg tgaactggct ggcccggtag
420
tcatccccgt aggagtccag cactctcatg aggaacctcc gttcctgctg cagcctccga
480
gttatcctct gcacctgatg gagcctgttc aggaccgct cgttcacctg ctcgatctcc
540
cggcagcgcc gacctagtgc ctggtacttt ctgcgattta attcccgtg gcgccgccgc
600
cgaccccggg ctgcctcttc ctcttcatct cgctcccga gccctgagcc gccagacca
660
cctgacacaa actccacttc cgtctccagc tcgctctcca ggatgtggcc accaaatagg
720
ggaggcaacg ccaactctga gcctggcggc gctgagaact cctcaaagcc cacggctgcc
780
atggtccctt ctctctgctc caattccatc tccgcgacct ccggaagccc cgggcctcag
840

```

agcttccgac ctcttcaatc tgtagggttaa gccgttcgca aaactacttg tcccatcagg
900
ctcagcagcc gaggacggcg ggacgtggcc ctaggccttg tgggagttgt agtttcctgt
960
ttccggcttc gcttcggccc acccccacgt ccaccccgaa tccctgctta aaggccttgc
1020
tttcttgtct aacgccgcaa ccagtcctct gagttgccaa cgtctttctt cttgtctcga
1080
cgccccgtcg tccggccaca gcgattctct gcttagcagg atcgggtccac agcgggacgt
1140
gagtctcttt cctcctcgcg gcttaccgct ctctccgcct agtgccagggt gctaataaag
1200
ttgttgtttc aaatgcggcc aggaacatcg cgagcgggga ccaatcagag agtagctttg
1260
cctctataac ggcgcgagag tgagacgtca tcggtgagcg actaacgcta gaaacagtgg
1320
tgcgcgagga ggagaggcct cgggatgtct ctggcagatg agctcttagc tgatctcgaa
1380
gaggcagcag aagaggagga aggaggaagc tatggggagg aagaagagga gccagcagtc
1440
gaggatgtgc aggaggagac acagctggat ctttccgggg attcagtcaa gaccatcgcc
1500
aagctatggg atagtaagat gtttgctgag attatgatga agattgagga gtatatcagc
1560
aagcaagcca aagcttcaga agtgatggga ccagtgaggc ccgcgcctga ataccgcgtc
1620
atcgtggatg ccaacaacct gaccgtggag atcgaaaacg agctgaacat catccataag
1680
ttcatccggg ataagtactc aaagagattc cctgaactgg agtccttggt ccccaatgca
1740
ctggattaca tccgcacggt caaggagctg ggcaacagcc tggacaagtg caagaacaat
1800
gagaacctgc agcagatcct caccaatgcc accatcatgg tcgtcagcgt caccgcctcc
1860
accacccagg ggcagcagct gtcggaggag gagctggagc ggctggagga ggctgcgac
1920
atggcgctgg agctgaacgc ctccaagcac cgcattctacg agtatgtgga gtcccggatg
1980
tccttcatcg caccacaacct gtccatcatt atcggggcat ccacggccgc caagatcatg
2040
ggtgtggccg gcggcctgac caacctctcc aagatgcccg cctgcaacat catgctgctc
2100
ggggcccagc gcaagacgct gtcgggcttc tcgtctacct cagtgtgctc ccacaccggc
2160
tacatctacc acagtgcacat cgtgcagctc ctgccaccgg atctgcggcg gaaagcggcc
2220
cggtgtgtgg ccgccaagtg cacactggca gcccgtgtgg acagtgtcca cgagagcaca
2280
gaaggggaagg tgggctacga actgaaggat gagatcgagc gcaaattcga caagtggcag
2340
gagccgccgc ctgtgaagca ggtgaagccg ctgcctgcgc ccctggatgg acagcgggaag
2400
aagcgaggcg gccgcaggta ccgcaagatg aaggagcggc tggggctgac ggagatccgg
2460

aagcaggcca accgtatgag cttcggagag atcgaggagg acgcctacca ggaggacctg
2520
ggattcagcc tgggccacct gggcaagtcg ggcagtgggc gtgtgcgcca gacacaggta
2580
aacgaggcca ccaaggccag gatctccaag acgctgcagc ggaccctgca gaagcagagc
2640
gtcgtatatg gcggaagtc caccatccgc gaccgtcctt cgggcacggc ctccagcgtg
2700
gccttcaccc cactccaggg cctggagatt gtgaaccac aggcggcaga gaagaagggtg
2760
gctgaggcca accagaagta tttctccagc atggctgagt tcctcaaggt caagggcgag
2820
aagagtggcc ttatgtccac ctgaatgact gcgtgtgtcc aaggtggctt cccactgaag
2880
ggacacagag gtccagtcct tctgaagggc taggatcggg ttctggcagg gagaacctgc
2940
cctgccactg gccccattgc tgggactgcc cagggaggag gccttggaag agtccggcct
3000
ggcctcccc aggaccgaga tcaccgcca gtatgggcta gagcaggtct tcatcatgcc
3060
ttgtcttttt taactgagaa aggagatttt ttgaaaagag tacaattaa aggacattgt
3120
caagatctgt caaaaaaaaa aaaaaaaaa
3148

<210> 3588

<211> 499

<212> PRT

<213> Homo sapiens

<400> 3588

Met	Ser	Leu	Ala	Asp	Glu	Leu	Leu	Ala	Asp	Leu	Glu	Glu	Ala	Ala	Glu
1				5					10					15	
Glu	Glu	Glu	Gly	Gly	Ser	Tyr	Gly	Glu	Glu	Glu	Glu	Glu	Pro	Ala	Ile
			20					25					30		
Glu	Asp	Val	Gln	Glu	Glu	Thr	Gln	Leu	Asp	Leu	Ser	Gly	Asp	Ser	Val
		35					40				45				
Lys	Thr	Ile	Ala	Lys	Leu	Trp	Asp	Ser	Lys	Met	Phe	Ala	Glu	Ile	Met
	50					55				60					
Met	Lys	Ile	Glu	Glu	Tyr	Ile	Ser	Lys	Gln	Ala	Lys	Ala	Ser	Glu	Val
65					70				75					80	
Met	Gly	Pro	Val	Glu	Ala	Ala	Pro	Glu	Tyr	Arg	Val	Ile	Val	Asp	Ala
			85					90						95	
Asn	Asn	Leu	Thr	Val	Glu	Ile	Glu	Asn	Glu	Leu	Asn	Ile	Ile	His	Lys
		100						105					110		
Phe	Ile	Arg	Asp	Lys	Tyr	Ser	Lys	Arg	Phe	Pro	Glu	Leu	Glu	Ser	Leu
		115					120					125			
Val	Pro	Asn	Ala	Leu	Asp	Tyr	Ile	Arg	Thr	Val	Lys	Glu	Leu	Gly	Asn
		130				135					140				
Ser	Leu	Asp	Lys	Cys	Lys	Asn	Asn	Glu	Asn	Leu	Gln	Gln	Ile	Leu	Thr
145					150				155					160	
Asn	Ala	Thr	Ile	Met	Val	Val	Ser	Val	Thr	Ala	Ser	Thr	Thr	Gln	Gly
			165					170						175	
Gln	Gln	Leu	Ser	Glu	Glu	Glu	Leu	Glu	Arg	Leu	Glu	Glu	Ala	Cys	Asp

BNSDOCID: <WO__0058473A2 | >

accttcattt cagtcccagc agcctccccc aaccagtcag ggtccctgaa gagcatctgg
 240
 ctctccacaa gacaatagac aggaagggga cccagtggcc cccccaagct tagctaattg
 300
 gagtgaagaa ccaggcagaa cccaggcagc agatgggata ggagtttcca agccagtgtg
 360
 tggggatagg ccctcccaat tcagaaacaa agcaaggccc tggccacagc caggaaggat
 420
 tgtaagggcc ttcctgagca gacacaaagg agccctgagc tgctgggggt gatgaggagc
 480
 ggaggcaggg ccaggcagag ggtctgcaaa gaattacact ggaaaggtgg aagggggaca
 540
 ttgggtctag tggtttggcc tgtggagagc tgtcaggaga ggggaggatg aggttgggtg
 600
 agacgcctga ggcaagggtg tttgggggtc ttgttggcag catggtggca aaaggctcca
 660
 gaggcagcca cgcgt
 675

<210> 3590

<211> 117

<212> PRT

<213> Homo sapiens

<400> 3590

Met	Leu	Pro	Thr	Arg	Pro	Pro	Asn	Thr	Leu	Ala	Ser	Gly	Val	Ser	Thr
1				5					10					15	
Asn	Leu	Ile	Leu	Pro	Ser	Pro	Asp	Ser	Ser	Pro	Gln	Ala	Lys	Pro	Leu
			20					25					30		
Asp	Pro	Met	Ser	Pro	Phe	His	Leu	Ser	Ser	Val	Ile	Leu	Cys	Arg	Pro
		35					40					45			
Ser	Ala	Trp	Pro	Cys	Leu	Arg	Ser	Ser	Ser	Pro	Pro	Ala	Ala	Gln	Gly
	50					55					60				
Ser	Phe	Val	Ser	Ala	Gln	Glu	Gly	Pro	Tyr	Asn	Pro	Ser	Trp	Leu	Trp
65					70					75				80	
Pro	Gly	Pro	Cys	Phe	Val	Ser	Glu	Leu	Gly	Gly	Pro	Ile	Pro	Lys	His
			85						90					95	
Trp	Leu	Gly	Asn	Ser	Tyr	Pro	Ile	Cys	Cys	Leu	Gly	Ser	Ala	Trp	Phe
			100					105						110	
Phe	Thr	His	Ile	Ser											
			115												

<210> 3591

<211> 669

<212> DNA

<213> Homo sapiens

<400> 3591

nacgcgtgct ctgcgcttgc catgagactc ctgggagccg cagccgtcgc ggctctgggg
 60
 cgcggaaggg ccccgccctc cctaggctgg cagaggaagc aggttaattg gaaggcctgc
 120
 cgatggtctt catcaggggt gattcctaata gaaaaaatac gaaatattgg aatctcagct
 180

cacattgatt ctgggaaaac tacattaaca gaacgagtcc ttactacac tggcagaatt
 240
 gcaaagatgc atgaggtgaa aggtaaagat ggagttggtg ctgtcatgga ttccatggaa
 300
 cttagagagac aaagaggaat cactattcag tcagcagcca cttacaccat gtggaaagat
 360
 gtcaatatta acattataga tactcctggg catgtggact tcacaataga agtggaaagg
 420
 gccctgagag tgttggtg tgcagtcctt gttctctgtg ctgttgagg ggtacagtgc
 480
 cagaccatga ctgtcaatcg tcagatgaag cgctacaacg ttccgtttct aacttttatt
 540
 aacaaattgg accgaatggg ctccaacca gccagggccc tgcagcaaat gaggtctaaa
 600
 ctaaatacata atgcagcgtt tatgcagata cccatggggtt tggagggtaa ttttaaagg
 660
 attgtagat
 669

<210> 3592

<211> 223

<212> PRT

<213> Homo sapiens

<400> 3592

Xaa	Ala	Cys	Ser	Ala	Leu	Ala	Met	Arg	Leu	Leu	Gly	Ala	Ala	Ala	Val
1				5					10					15	
Ala	Ala	Leu	Gly	Arg	Gly	Arg	Ala	Pro	Ala	Ser	Leu	Gly	Trp	Gln	Arg
		20						25					30		
Lys	Gln	Val	Asn	Trp	Lys	Ala	Cys	Arg	Trp	Ser	Ser	Ser	Gly	Val	Ile
		35					40					45			
Pro	Asn	Glu	Lys	Ile	Arg	Asn	Ile	Gly	Ile	Ser	Ala	His	Ile	Asp	Ser
	50					55					60				
Gly	Lys	Thr	Thr	Leu	Thr	Glu	Arg	Val	Leu	Tyr	Thr	Gly	Arg	Ile	
65				70					75					80	
Ala	Lys	Met	His	Glu	Val	Lys	Gly	Lys	Asp	Gly	Val	Gly	Ala	Val	Met
			85					90						95	
Asp	Ser	Met	Glu	Leu	Glu	Arg	Gln	Arg	Gly	Ile	Thr	Ile	Gln	Ser	Ala
		100						105					110		
Ala	Thr	Tyr	Thr	Met	Trp	Lys	Asp	Val	Asn	Ile	Asn	Ile	Ile	Asp	Thr
	115					120					125				
Pro	Gly	His	Val	Asp	Phe	Thr	Ile	Glu	Val	Glu	Arg	Ala	Leu	Arg	Val
	130					135				140					
Leu	Asp	Gly	Ala	Val	Leu	Val	Leu	Cys	Ala	Val	Gly	Gly	Val	Gln	Cys
145				150					155					160	
Gln	Thr	Met	Thr	Val	Asn	Arg	Gln	Met	Lys	Arg	Tyr	Asn	Val	Pro	Phe
			165					170						175	
Leu	Thr	Phe	Ile	Asn	Lys	Leu	Asp	Arg	Met	Gly	Ser	Asn	Pro	Ala	Arg
		180						185					190		
Ala	Leu	Gln	Gln	Met	Arg	Ser	Lys	Leu	Asn	His	Asn	Ala	Ala	Phe	Met
	195						200					205			
Gln	Ile	Pro	Met	Gly	Leu	Glu	Gly	Asn	Phe	Lys	Gly	Ile	Val	Asp	
	210					215								220	

<210> 3593
 <211> 1005
 <212> DNA
 <213> Homo sapiens

<400> 3593
 gaacgaaaga tggcggcgcc cgtaaggcgg acgctgttag gggcggcggg gggttggcgg
 60
 cggttcgaga ggctctgggc cggcagtcta agctctcgca gcctggctct tgcagccgca
 120
 ccctcaagca acggatcccc atggcgcttg ttgggcgcgt tgtgcctgca gcggccacct
 180
 gtagtctcca agccgttgac cccattgcag gaagagatgg cgtctctact gcagcagatt
 240
 gagatagaga gaagcctgta ttcagaccac gagcttcgtg ctctggatga aaaccagcga
 300
 ctggcaaaga agaaagctga ccttcattgat gaagaagatg aacaggatat attgctggcg
 360
 caagatttgg aagatatgtg ggagcagaaa tttctacagt tcaaacttgg agctcgcata
 420
 acagaagctg atgaaaagaa tgaccgaaca tccctgaaca ggaagctaga caggaacctt
 480
 gtctgttag tcagagagaa gtttgagac caggatgttt ggatactgcc ccaggcagag
 540
 tggcagcctg gggagaccct tcgaggaaca gctgaacgaa ccctggccac actctcagaa
 600
 aacaacatgg aagccaagtt cctaggaaat gcaccctgtg ggcactacac attcaagttc
 660
 cccaggcaa tgcggacaga gagtaacctc ggagccaagg tgttcttctt caaagcactg
 720
 ctattaactg gagacttttc ccaggctggg aataagggcc atcatgtgtg ggtcactaag
 780
 gatgagctgg gtgactatctt gaaacaaaaa tacctggccc aagttaggag gtttgtttca
 840
 gacctctgat gggccgagct gcctgtggac ggtgctcaga caagtctggg attagagcct
 900
 caaggacatt gtgtgattgc ctcacatttg caggaatat caagcagcaa actaaattct
 960
 gagaaataaa cgagtctatt actgaaaaaa aaaaaaaaaa aaaaa
 1005

<210> 3594
 <211> 282
 <212> PRT
 <213> Homo sapiens

<400> 3594
 Glu Arg Lys Met Ala Ala Pro Val Arg Arg Thr Leu Leu Gly Val Ala
 1 5 10 15
 Gly Gly Trp Arg Arg Phe Glu Arg Leu Trp Ala Gly Ser Leu Ser Ser
 20 25 30
 Arg Ser Leu Ala Leu Ala Ala Ala Pro Ser Ser Asn Gly Ser Pro Trp
 35 40 45
 Arg Leu Leu Gly Ala Leu Cys Leu Gln Arg Pro Pro Val Val Ser Lys

50		55		60											
Pro	Leu	Thr	Pro	Leu	Gln	Glu	Glu	Met	Ala	Ser	Leu	Leu	Gln	Gln	Ile
65					70					75					80
Glu	Ile	Glu	Arg	Ser	Leu	Tyr	Ser	Asp	His	Glu	Leu	Arg	Ala	Leu	Asp
			85						90					95	
Glu	Asn	Gln	Arg	Leu	Ala	Lys	Lys	Lys	Ala	Asp	Leu	His	Asp	Glu	Glu
			100						105					110	
Asp	Glu	Gln	Asp	Ile	Leu	Leu	Ala	Gln	Asp	Leu	Glu	Asp	Met	Trp	Glu
		115						120						125	
Gln	Lys	Phe	Leu	Gln	Phe	Lys	Leu	Gly	Ala	Arg	Ile	Thr	Glu	Ala	Asp
		130				135					140				
Glu	Lys	Asn	Asp	Arg	Thr	Ser	Leu	Asn	Arg	Lys	Leu	Asp	Arg	Asn	Leu
145					150					155					160
Val	Leu	Leu	Val	Arg	Glu	Lys	Phe	Gly	Asp	Gln	Asp	Val	Trp	Ile	Leu
			165						170					175	
Pro	Gln	Ala	Glu	Trp	Gln	Pro	Gly	Glu	Thr	Leu	Arg	Gly	Thr	Ala	Glu
		180						185					190		
Arg	Thr	Leu	Ala	Thr	Leu	Ser	Glu	Asn	Asn	Met	Glu	Ala	Lys	Phe	Leu
		195					200					205			
Gly	Asn	Ala	Pro	Cys	Gly	His	Tyr	Thr	Phe	Lys	Phe	Pro	Gln	Ala	Met
		210				215						220			
Arg	Thr	Glu	Ser	Asn	Leu	Gly	Ala	Lys	Val	Phe	Phe	Phe	Lys	Ala	Leu
225				230						235					240
Leu	Leu	Thr	Gly	Asp	Phe	Ser	Gln	Ala	Gly	Asn	Lys	Gly	His	His	Val
			245						250					255	
Trp	Val	Thr	Lys	Asp	Glu	Leu	Gly	Asp	Tyr	Leu	Lys	Pro	Lys	Tyr	Leu
		260						265					270		
Ala	Gln	Val	Arg	Arg	Phe	Val	Ser	Asp	Leu						
		275					280								

<210> 3595

<211> 1903

<212> DNA

<213> Homo sapiens

<400> 3595

```

ttccaggtga cccgggggga ctacgcgccc atcctccaga aggtggtgga gcagctggag
60
aaagccaagg cctatgcagc caacagccac caggggcaga tgctggccca gtatatagag
120
agcttcaccc agggctccat cgaggccac aagaggggct cccgcttctg gatccaggac
180
aaaggcccca tcgtggagag ttacatcggg ttcacgcaga gctaccgcga cccctttggt
240
tcccaggag aatttgaagg ttctgtagct gtggtgaaca aggccatgag tgccaagttt
300
gagcggctgg tggcgagcgc agagcagctg ctgaaggagc tgccctggcc cccaaccttt
360
gagaaggaca agttcctcac ccctgacttc acctccctgg atgttctcac cttecgctggc
420
tccggcatcc ctgccggcat caacatcccc aactacgatg atctgaggca gacggaaggc
480
tttaagaacg tgctcgctggg gaatgtgctg gctgtggcct acgccacgca gcgggagaag
540

```


cttacctttc tggaggagga tgacaaggac ctgtacatcc tctggaagg ggcctccttc
600
gatgtgcagg tgggcctgca cgagctgctg ggccatggca gtggcaagct cttcgtacag
660
gacgaaaaag gagcattcaa ctttgaccag gaaacagtga tcaaccaga gacgggagag
720
cagattcaga gctggtatcg gagcggggag acctgggata gcaagttcag caccatcgcc
780
tccagctacg aagagtgccg ggctgagagc gtgggtctct acctctgtct ccaccgcaa
840
gtgctggaga tctttggctt tgagggggct gatgcggagg acgtgatcta cgtgaactgg
900
ctcaacatgg ttcggggccg gctgctcgct ctggagttct acacacctga ggccttcaac
960
tggcgacagg cccatatgca ggcccgggtt gtgatcctga gagtcttgct ggaggetggc
1020
gagggactcg ttaccatcac tcccaccaca ggctccgatg ggcgcccaga tgcccgggtc
1080
cgctcgacc gcagcaagat ccggtctgtg ggcaagcctg ctctagagcg cttcctgcgg
1140
agacttcagg tgctgaagtc cacaggggat gtggccggag ggcgggccct gtacgagggg
1200
tatgcaacgg tcaactgatgc gccccccgag tgcttctca ccctcagga caggtgctg
1260
ctgcgtaagg aatctcgga gctcattgtt cagcccaaca ctgccttga aggtaatggc
1320
tcagacgtgc agcttctgga atacgaggcg tcagctgctg gcctcatccg atccttctct
1380
gagcgtttcc cagaggatgg acccgagttg gaggagatcc tcacacagct ggccacagcc
1440
gatgcccgat tctggaaggg ccccgatgag gcccacatctg gccaaagcttg aggaagatgt
1500
gtggccttgc cccattcca tcagaccaag gctgcaagt ggcctccagc tgtgtgtatt
1560
taggggtggg gagggggagg ggcaggagct tggaccttgg tactacctca gctgaggggt
1620
gtgnacaaa ccccttccat ttgtcagcac tttccagcct gccaatgtct tcccctctgt
1680
gatcatttca tctgcactgc catacgtgga gtgagcaaga cagggttac catcctgtct
1740
accagatgag gaaatggcag ttctgagaag tcaactgtct agatcccga ggtggcacgt
1800
gacagctagg gttcaaaacg ttctcaccaa atccaatgct cctcacatat taattttata
1860
accagacaaa taaatattag agacaaccac catcaaaaaa aaa
1903

<210> 3596

<211> 496

<212> PRT

<213> Homo sapiens

<400> 3596

Phe Gln Val Thr Arg Gly Asp Tyr Ala Pro Ile Leu Gln Lys Val Val

```

1           5           10           15
Glu Gln Leu Glu Lys Ala Lys Ala Tyr Ala Ala Asn Ser His Gln Gly
20           25           30
Gln Met Leu Ala Gln Tyr Ile Glu Ser Phe Thr Gln Gly Ser Ile Glu
35           40           45
Ala His Lys Arg Gly Ser Arg Phe Trp Ile Gln Asp Lys Gly Pro Ile
50           55           60
Val Glu Ser Tyr Ile Gly Phe Ile Glu Ser Tyr Arg Asp Pro Phe Gly
65           70           75           80
Ser Arg Gly Glu Phe Glu Gly Phe Val Ala Val Val Asn Lys Ala Met
85           90           95
Ser Ala Lys Phe Glu Arg Leu Val Ala Ser Ala Glu Gln Leu Leu Lys
100          105          110
Glu Leu Pro Trp Pro Pro Thr Phe Glu Lys Asp Lys Phe Leu Thr Pro
115          120          125
Asp Phe Thr Ser Leu Asp Val Leu Thr Phe Ala Gly Ser Gly Ile Pro
130          135          140
Ala Gly Ile Asn Ile Pro Asn Tyr Asp Asp Leu Arg Gln Thr Glu Gly
145          150          155          160
Phe Lys Asn Val Ser Leu Gly Asn Val Leu Ala Val Ala Tyr Ala Thr
165          170          175
Gln Arg Glu Lys Leu Thr Phe Leu Glu Glu Asp Asp Lys Asp Leu Tyr
180          185          190
Ile Leu Trp Lys Gly Pro Ser Phe Asp Val Gln Val Gly Leu His Glu
195          200          205
Leu Leu Gly His Gly Ser Gly Lys Leu Phe Val Gln Asp Glu Lys Gly
210          215          220
Ala Phe Asn Phe Asp Gln Glu Thr Val Ile Asn Pro Glu Thr Gly Glu
225          230          235          240
Gln Ile Gln Ser Trp Tyr Arg Ser Gly Glu Thr Trp Asp Ser Lys Phe
245          250          255
Ser Thr Ile Ala Ser Ser Tyr Glu Glu Cys Arg Ala Glu Ser Val Gly
260          265          270
Leu Tyr Leu Cys Leu His Pro Gln Val Leu Glu Ile Phe Gly Phe Glu
275          280          285
Gly Ala Asp Ala Glu Asp Val Ile Tyr Val Asn Trp Leu Asn Met Val
290          295          300
Arg Ala Gly Leu Leu Ala Leu Glu Phe Tyr Thr Pro Glu Ala Phe Asn
305          310          315          320
Trp Arg Gln Ala His Met Gln Ala Arg Phe Val Ile Leu Arg Val Leu
325          330          335
Leu Glu Ala Gly Glu Gly Leu Val Thr Ile Thr Pro Thr Thr Gly Ser
340          345          350
Asp Gly Arg Pro Asp Ala Arg Val Arg Leu Asp Arg Ser Lys Ile Arg
355          360          365
Ser Val Gly Lys Pro Ala Leu Glu Arg Phe Leu Arg Arg Leu Gln Val
370          375          380
Leu Lys Ser Thr Gly Asp Val Ala Gly Gly Arg Ala Leu Tyr Glu Gly
385          390          395          400
Tyr Ala Thr Val Thr Asp Ala Pro Pro Glu Cys Phe Leu Thr Leu Arg
405          410          415
Asp Thr Val Leu Leu Arg Lys Glu Ser Arg Lys Leu Ile Val Gln Pro
420          425          430
Asn Thr Arg Leu Glu Gly Asn Gly Ser Asp Val Gln Leu Leu Glu Tyr

```

<210> 3598

<211> 159
 <212> PRT
 <213> Homo sapiens

<400> 3598
 Arg Ser Leu Thr Ser Cys Ser Ser Asp Ile Thr Leu Arg Gly Gly Arg
 1 5 10 15
 Glu Gly Phe Glu Ser Asp Thr Asp Ser Glu Phe Thr Phe Lys Met Gln
 20 25 30
 Asp Tyr Asn Lys Asp Asp Met Ser Tyr Arg Arg Ile Ser Ala Val Glu
 35 40 45
 Pro Lys Thr Ala Leu Pro Phe Asn Arg Phe Leu Pro Asn Lys Ser Arg
 50 55 60
 Gln Pro Ser Tyr Val Pro Ala Pro Leu Arg Lys Lys Lys Pro Asp Lys
 65 70 75 80
 His Glu Asp Asn Arg Arg Ser Trp Ala Ser Pro Val Tyr Thr Glu Ala
 85 90 95
 Asp Gly Thr Phe Ser Arg Ser Lys Ser Met Ser Asp Val Ser Ala Glu
 100 105 110
 Asp Val Gln Asn Leu Arg Gln Leu Arg Tyr Glu Glu Met Gln Lys Ile
 115 120 125
 Lys Ser Gln Leu Lys Glu Gln Asp Gln Lys Trp Gln Asp Asp Leu Ala
 130 135 140
 Lys Trp Lys Asp Arg Arg Lys Ser Tyr Thr Ser Asp Leu Gln Lys
 145 150 155

<210> 3599
 <211> 691
 <212> DNA
 <213> Homo sapiens

<400> 3599
 gtgcacatcc tcatgggctc ctgttacaag accaaaaaat tctgtctctc cctggcagaa
 60
 aacaagctgg gtccttgcac gctcctggca ctgaggggga accagaccat ggtggaggta
 120
 aggagctggt cgggggtccct ggtgggggtgg ctgggtcccc gtcccttgte cgtgcccata
 180
 gagcatctgc tgggagccaa gaactgctgc aggcacgggg ggcagtgggt gaggcgtgca
 240
 gtcccagccg tcttgagctt agtgggagcc tcgagccttc atcatgcagt gtatttgttt
 300
 ctgttgatgat ccagctgac cattgatcag tgggggttggg gacgcttctg ttctgctcat
 360
 ttattgctgt gtaacaaacc acctctaagt gagggcttta aaacaagatc gttcatttct
 420
 tttgcacatg ggcattgggg tacctgggag cagctacgca cttctcacct ggggcctcat
 480
 cagtcagatg gggccagggt ggggttagccc caaggcttct cgcattggcc taagaggcct
 540
 cagacaatga gggctttggc ggctgggggt cccagcgcac acccttcacc tcgtggcctc
 600
 caggtagcct gtccacctgc caagaacaca cacaccagc cccacaggtc acccttcacc
 660

tgctgctgct cctctctctc cctgcacgcg t
691

<210> 3600

<211> 98

<212> PRT

<213> Homo sapiens

<400> 3600

Met	Gly	Ser	Cys	Tyr	Lys	Thr	Lys	Lys	Phe	Leu	Leu	Ser	Leu	Ala	Glu
1			5						10					15	
Asn	Lys	Leu	Gly	Pro	Cys	Met	Leu	Leu	Ala	Leu	Arg	Gly	Asn	Gln	Thr
			20						25				30		
Met	Val	Glu	Val	Arg	Ser	Trp	Ser	Gly	Ser	Leu	Val	Gly	Trp	Leu	Ala
		35					40					45			
Pro	Arg	Pro	Leu	Ser	Val	Pro	Ile	Glu	His	Leu	Leu	Gly	Ala	Lys	Asn
	50					55					60				
Cys	Cys	Arg	His	Gly	Gly	Gln	Trp	Val	Arg	Arg	Ala	Val	Pro	Ala	Val
65				70					75					80	
Leu	Ser	Leu	Val	Gly	Ala	Ser	Ser	Leu	His	His	Ala	Val	Tyr	Leu	Phe
				85					90					95	
Leu	Leu														

<210> 3601

<211> 2963

<212> DNA

<213> Homo sapiens

<400> 3601

cgatcctccc acctcagcct cccaaagggc tgagattaca ggtgtgagcc cccgaatccg
60
gtgtgcactg ctgtttactt agtatttttc tttaactaga tttattttta aacaaggctt
120
tgtccaagga catttggtc gcaggcacag agctgattaa ctcgttatgt atcttttgat
180
aataaggcag cgatcattaa gaaaaacgtg tagccaatga aataacatgt tctgggcccc
240
accactggac tgggaggtgc agcgcattca agcagaggct gcctcctgcc ctccacgcct
300
gtgctctcgc caggcagggg ctctgctgct tacagcagtg cggccatctc ggcttctctc
360
cacatcgtct gtcacgcgct ggtccccacc atacctctcg ccaccccgct cctctgtccc
420
cgtgcggcct gaggagctcc agctttccct gccagcgggtg ctctgggagt ggggacgtga
480
tgcagggcga gcatgatgca acggggcacc ccagaccctt ccctcccgtg gggggagggg
540
tgtggcacgc agaggggcag agggcgggga cactggcccc gtgggggaag aaggtgctgt
600
cacagccgtt actgtccccc gtgggacccc agcctggagc ccccatcct ttggctcctg
660
cctgtggcca ctacgtctc aggtggccac atgcacatcc cctgtcctt ccctgcgcac
720

ctgccctgcc cagtggcctt tctggtecca gctactgaaa ccggtgagct gctccagggt
780
gaggctgctt tctggctcct ggtgtatttg gacacagata ggcccttagt gtccagaggg
840
gccccatgca gccctcatgg tcagcaggac acccaggata gacccccctcc acgcagcacc
900
tgggccctgg gagcggctgc ttttaggatg ccacctgttc ctgggcgcct tgttttttagc
960
ttctgacctg aagatgagcg ggggagcgcg gtggcgaggg cacgtgggcg tggctcacgg
1020
tctcctctct gtggcaggta catgtcccag agcaagcaca cggaggcccg ggagctcatg
1080
tactcgggag ccctgctctt cttcagccat ggccagcaaa acagtgcagc agacttgctc
1140
atgttggctc tggagtccct ggagaaggcg gaagtggagg tggctgacga gctgctggaa
1200
aatctggcta aagtgttcag cctgatggac cccaactctc ctgagcgcgt gacctttgtg
1260
tccagagccc tgaagtggc cagtgggggc tccgggaagc tgggccaccc ccggtgcac
1320
cagctgctgg ccctcaccct gtggaaagaa caaaactatt gtgagtcgag gtatcatttt
1380
ctgcactcag cggacgggga gggctgtgcc aacatgctgg tggagtattc cacgtccgcg
1440
ggcttcgca gcgaggtgga catgttcgtg gcccaggccg tgctacagtt tctctgttta
1500
aaaaacaaaa gtacgcctc ggtggtcttc acgacgtaca cccagaagca cccgtccatc
1560
gaggacgggc ctccgtttgt ggagccgctg cttaacttca tctggttcct gctgctggct
1620
gtggacggtg ggaagctgac ggtgttcact gtgctgtgtg agcagtacca gccatccctc
1680
cggcgggacc ccatgtacaa cgagtacctc gaccgcatag gacagctgtt cttcggcgctc
1740
ccgccaagc agacgtcttc ctacgggggc ctgctcgga accttctgac cagcctcatg
1800
ggctcctcag agcaggagga tggggaggag agccccagcg acggcagccc catcgagctg
1860
gactgaactg gccaggccac gtggagacac cacggtcgac gacggctgga gggacgtttc
1920
agaggcgagt cctgggtggc tcctcgcctt gggggctcct ggccctgagg ctggcggtgg
1980
ccgcatgccg gcgcgtgtct gtttctgtgc ggcggctcag ggtggcgcg ctgctgctca
2040
ctgtgctgct gggacccaag agtggggcgt cgccccctgct ggccgcccgcg tcccccgaga
2100
ttgaccaca ataaagcaca ggccttaccg cggcgtcacc ctctcccact cctttgttct
2160
gggtcctttc gggagggctg atgggcagca caggaggccc gtccctcgggg ggctgcgcac
2220
atcacgtcc ttgccggcg tccggcacag ctgcggtcac caaagcaggt gctggccctc
2280
ggacctgaga gccagccag ggcccatgtg gtctgcaa at gggagcggct gtttttgaac
2340

acgggggtcat tctgcagtca ggacgaaccg gtccccgtcg cagacggagt gcacgtgccc
 2400
 tgcgccacat cctcacgctc ggtggagggga cgcgtagcggc gggacgggtgc ctacgggtac
 2460
 ttgcagctgt gtcccatgtg gcatcccaga gctgcgccct gctggtctct gtgagcgcca
 2520
 cgctgctgtg ctggaaatgc cgctttaaaa agggataccg tgggactctg cccgtctctt
 2580
 tcataacgca atatttattt gtattgggtg acgattgatt ctttcgacct aacattttgg
 2640
 gttttaacca aataaccggt ccaggagtga gcagctccgt tctgtcagat gctactccaa
 2700
 atgttaccag aacgatgaca aaaggggaga cgctctatatt tttcacagtt aaatgacagt
 2760
 tgtagattga tacgcagttg tgcatgggaa ggggaaacgc acagctttat ttactgtaaa
 2820
 gtggaatttc aggaaggctt gtgtgaaccg ttgcgcataa ataaaccctt tctaccgggc
 2880
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 2940
 aaaaaaaaaa aaaaaaaaaa aaa
 2963

<210> 3602

<211> 299

<212> PRT

<213> Homo sapiens

<400> 3602

Pro	Glu	Asp	Glu	Arg	Gly	Ser	Ala	Val	Ala	Arg	Ala	Arg	Gly	Arg	Gly
1				5					10					15	
Ser	Arg	Ser	Pro	Leu	Cys	Gly	Arg	Tyr	Met	Ser	Gln	Ser	Lys	His	Thr
			20					25					30		
Glu	Ala	Arg	Glu	Leu	Met	Tyr	Ser	Gly	Ala	Leu	Leu	Phe	Phe	Ser	His
			35					40					45		
Gly	Gln	Gln	Asn	Ser	Ala	Ala	Asp	Leu	Ser	Met	Leu	Val	Leu	Glu	Ser
			50				55				60				
Leu	Glu	Lys	Ala	Glu	Val	Glu	Val	Ala	Asp	Glu	Leu	Leu	Glu	Asn	Leu
65					70					75				80	
Ala	Lys	Val	Phe	Ser	Leu	Met	Asp	Pro	Asn	Ser	Pro	Glu	Arg	Val	Thr
				85					90					95	
Phe	Val	Ser	Arg	Ala	Leu	Lys	Trp	Ser	Ser	Gly	Gly	Ser	Gly	Lys	Leu
			100					105					110		
Gly	His	Pro	Arg	Leu	His	Gln	Leu	Leu	Ala	Leu	Thr	Leu	Trp	Lys	Glu
			115				120					125			
Gln	Asn	Tyr	Cys	Glu	Ser	Arg	Tyr	His	Phe	Leu	His	Ser	Ala	Asp	Gly
			130				135				140				
Glu	Gly	Cys	Ala	Asn	Met	Leu	Val	Glu	Tyr	Ser	Thr	Ser	Arg	Gly	Phe
145					150					155				160	
Arg	Ser	Glu	Val	Asp	Met	Phe	Val	Ala	Gln	Ala	Val	Leu	Gln	Phe	Leu
				165				170						175	
Cys	Leu	Lys	Asn	Lys	Ser	Ser	Ala	Ser	Val	Val	Phe	Thr	Thr	Tyr	Thr
			180				185					190			
Gln	Lys	His	Pro	Ser	Ile	Glu	Asp	Gly	Pro	Pro	Phe	Val	Glu	Pro	Leu

195	200	205
Leu Asn Phe Ile Trp Phe Leu Leu Leu Ala Val Asp Gly Gly Lys Leu		
210	215	220
Thr Val Phe Thr Val Leu Cys Glu Gln Tyr Gln Pro Ser Leu Arg Arg		
225	230	235
Asp Pro Met Tyr Asn Glu Tyr Leu Asp Arg Ile Gly Gln Leu Phe Phe		240
	245	250
Gly Val Pro Pro Lys Gln Thr Ser Ser Tyr Gly Gly Leu Leu Gly Asn		255
	260	265
Leu Leu Thr Ser Leu Met Gly Ser Ser Glu Gln Glu Asp Gly Glu Glu		270
	275	280
Ser Pro Ser Asp Gly Ser Pro Ile Glu Leu Asp		285
290	295	

<210> 3603

<211> 1082

<212> DNA

<213> Homo sapiens

<400> 3603

```

nnagctcctg cggaaccgat ctcaagcaca aggacaagca ggaaaacggc gagaggactg
60
gaggggtgcc tctgatcaaa gcccacaaga gagaaacacc agatgaaaat ggtaaaaccc
120
agagagccga tgatttttaa atgtgtgttt gtgggtgaaa tggctgcgca ggtcggagcg
180
gtgcgcgtag tacgggcggt ggcggcgag gagagaccgg acaaagaggg gaaggagaaa
240
cctcatgctg ggggtctccc gcggggagtt aaacggcagc gccgatctag cagtgggggg
300
tctcaggaga agcggggggcg gccgagccag gagccccctc tcgctcccc tcaccggcgg
360
cgtcgcagcc gccaacatcc tgggcccgtg ccgccaacga atgcagcccc aactgtccca
420
ggccctgttg agcctcttct cctgccgcct ccgcccgcac cttegtctggc accgcgggg
480
cccgtgtcg ctgccccctc cccggcccc agcaccggc cctcttcacc ttctgcctc
540
tgacggtgag cgcgccggg cccaagcata agggccacaa ggagcggcac aagcaccatc
600
accaccggc cccgatggt gatcccagct cctgcggaac cgatctcaag cacaaggaca
660
agcaggaaaa cggcgagagg actggagggg tgcctctgat caaagcccc aagagagaaa
720
caccgatga aaatggtaaa acccagagag ccgatgattt tgtcttgaag aaaataaaga
780
agaaaaagaa aaagaaacac cgagaagaca tgcgaggaag acgccttaaa atgtacaata
840
aggaagtaca aaccgtctgt gctggcctga cccgcatcag taaagaaatt ctcacccaag
900
gacaaataaa tagcacttca ggacttaata aggagtcctt caggatatctg aaagatgaac
960
agctgtgccg attaaatttg ggtatgcaag aatatcgggt accccaggga gtacaaacac
1020

```


cttttatgac tcaccaggaa cattctattc gtagaaattt cttaaaaaaca ggtactaaat
1080

tt

1082

<210> 3604

<211> 146

<212> PRT

<213> Homo sapiens

<400> 3604

Met	Lys	Met	Val	Lys	Pro	Arg	Glu	Pro	Met	Ile	Phe	Lys	Cys	Val	Phe
1				5					10					15	
Val	Gly	Glu	Met	Ala	Ala	Gln	Val	Gly	Ala	Val	Arg	Val	Val	Arg	Ala
			20					25					30		
Val	Ala	Ala	Gln	Glu	Glu	Pro	Asp	Lys	Glu	Gly	Lys	Glu	Lys	Pro	His
		35					40					45			
Ala	Gly	Val	Ser	Pro	Arg	Gly	Val	Lys	Arg	Gln	Arg	Arg	Ser	Ser	Ser
	50					55				60					
Gly	Gly	Ser	Gln	Glu	Lys	Arg	Gly	Arg	Pro	Ser	Gln	Glu	Pro	Pro	Leu
65					70				75					80	
Ala	Pro	Pro	His	Arg	Arg	Arg	Arg	Ser	Arg	Gln	His	Pro	Gly	Pro	Leu
				85				90					95		
Pro	Pro	Thr	Asn	Ala	Ala	Pro	Thr	Val	Pro	Gly	Pro	Val	Glu	Pro	Leu
			100					105					110		
Leu	Leu	Pro	Pro	Pro	Pro	Pro	Pro	Ser	Leu	Ala	Pro	Ala	Gly	Pro	Ala
		115					120					125			
Val	Ala	Ala	Pro	Leu	Pro	Ala	Pro	Ser	Thr	Arg	Pro	Ser	Ser	Pro	Ser
	130					135					140				
Arg	Leu														
145															

<210> 3605

<211> 2004

<212> DNA

<213> Homo sapiens

<400> 3605

nggcggcggc gatggccgag caggagggcg cccgcaacgg cggcccaacc gcggggcgtc
60
cagcgtgtgg agggcaagct gcgcgccagc gtcgagaagg gcgactacta cgaggcgcac
120
cagatgtacc ggaccctgtt cttcaggtac atgtcccaga gcaagcacac ggaggcccgg
180
gagctcatgt actcgggagc cctgctcttc ttcagccatg gccagcaaaa cagtgcagca
240
gacttgcca tgctggtcct ggagtccttg gagaaggcgg aagtggaggt ggctgacgag
300
ctgctggaaa atctggctaa agtggttcagc ctgatggacc ccaactctcc tgagcgcgtg
360
acctttgtgt ccagagccct gaagtgggcc agtgggggct ccgggaagct gggccacccc
420
cggctgcacc agctgctggc cctcacccctg tggaaagaac aaaactattg tgagtcgagg
480

tatcattttc tgcactcagc ggacggggag ggctgtgcc aacatgctggg ggagtattcc
540
acgtcccgcg gcttccgcag cgaggtggac atgttcgtgg ctcaggccgt gctacagttt
600
ctctgttttaaaaacacaaaag tagcgcatcg gtggctcttca cgacgtacac ccagaagcac
660
ccgtccatcg aggacggggc tccgtttgtg gagccgctgc ttaacttcat ctggttcctg
720
ctgctggctg tggacgggtg gaagctgacg gtgttccactg tgctgtgtga gcagtaccag
780
ccatccctcc ggcggggacc catgtacaac gactacctcg accgcatagg acagctgttc
840
ttcggcgctc cgcaccaagca gacgtcttcc tacggggggc tgctcgggaa ccttctgacc
900
agcctcatgg gctcctcaga gcaggaggat ggggaggaga gccccagcga cggcagcccc
960
atcgagctgg actgaactgg ccaggccacg tggagacacc acggtcgacg acggctggag
1020
ggacgtttca gaggcgagtc ctgggtggct cctcgccttg ggggctcctg gccctgaggc
1080
tggcggtggc cgcattgccg cgcgtgtctg tttctgtgcg gcggctcagg gtggcgcggc
1140
tgctgtcac tgtgtgtgtg ggacccaaga gtggggcgct gccctgtctg gccgccgct
1200
cccccgagat tgaccacaaa taaagcacag gccttaccgc ggcgtcacc cctccactc
1260
ctttgttctg ggtcctttcg ggagggtga tgggcagcac aggaggcccg tcctcggggg
1320
gctgcgcaca tcacgtcct tgcggggcgt ccggcacagc tgcggtcacc aaagcagggtg
1380
ctggccctcg gacctgagag ccagccagg gcccatgtgg tctgcaaag ggagcggtg
1440
tttttgaaca cgggggtcatt ctgcagtcag gacgaaccgg tccccgtcgc agacggagtg
1500
cacgtgccct gcgccacatc ctcacgtcgt gtggaggagc gcgtgcggcg ggacggtgcc
1560
tacgggtact tgcagctgtg tcccatgtgg catcccagag ctgcgccttg ctggtctctg
1620
tgagcgccac gctgctgtgc tggaaatgcc gctttaaaaa gggataccgt gggactctgc
1680
ccgtctcttt cataacgcaa tatttatttg tattgggtga cgattgattc tttcgacct
1740
acattttggg ttttaaccaa ataaccggtc caggagtga cagctccgtt ctgtcagatg
1800
ctactccaaa tgttaccaga acgatgacaa aaggggagac gctctatttt ttcacagtta
1860
aatgacagtt gtagattgat acgcagttgt gcatgggaag gggaaacgca cagctttatt
1920
tactgtaaaag tggaatttca ggaaggcttg tgtgaaccgt tgcgcataaa taaaccctt
1980
ctaccgggca aaaaaaaaaa aaaa
2004

<210> 3606

<211> 324
 <212> PRT
 <213> Homo sapiens

<400> 3606

```

Xaa Arg Arg Arg Trp Pro Ser Arg Arg Ala Pro Ala Thr Ala Ala Gln
 1           5           10           15
Pro Arg Gly Val Gln Arg Val Glu Gly Lys Leu Arg Ala Ser Val Glu
      20           25           30
Lys Gly Asp Tyr Tyr Glu Ala His Gln Met Tyr Arg Thr Leu Phe Phe
      35           40           45
Arg Tyr Met Ser Gln Ser Lys His Thr Glu Ala Arg Glu Leu Met Tyr
      50           55           60
Ser Gly Ala Leu Leu Phe Ser His Gly Gln Gln Asn Ser Ala Ala
      65           70           75           80
Asp Leu Ser Met Leu Val Leu Glu Ser Leu Glu Lys Ala Glu Val Glu
      85           90           95
Val Ala Asp Glu Leu Leu Glu Asn Leu Ala Lys Val Phe Ser Leu Met
      100          105          110
Asp Pro Asn Ser Pro Glu Arg Val Thr Phe Val Ser Arg Ala Leu Lys
      115          120          125
Trp Ser Ser Gly Gly Ser Gly Lys Leu Gly His Pro Arg Leu His Gln
      130          135          140
Leu Leu Ala Leu Thr Leu Trp Lys Glu Gln Asn Tyr Cys Glu Ser Arg
      145          150          155          160
Tyr His Phe Leu His Ser Ala Asp Gly Glu Gly Cys Ala Asn Met Leu
      165          170          175
Val Glu Tyr Ser Thr Ser Arg Gly Phe Arg Ser Glu Val Asp Met Phe
      180          185          190
Val Ala Gln Ala Val Leu Gln Phe Leu Cys Leu Lys Asn Lys Ser Ser
      195          200          205
Ala Ser Val Val Phe Thr Thr Tyr Thr Gln Lys His Pro Ser Ile Glu
      210          215          220
Asp Gly Pro Pro Phe Val Glu Pro Leu Leu Asn Phe Ile Trp Phe Leu
      225          230          235          240
Leu Leu Ala Val Asp Gly Gly Lys Leu Thr Val Phe Thr Val Leu Cys
      245          250          255
Glu Gln Tyr Gln Pro Ser Leu Arg Arg Asp Pro Met Tyr Asn Glu Tyr
      260          265          270
Leu Asp Arg Ile Gly Gln Leu Phe Phe Gly Val Pro Pro Lys Gln Thr
      275          280          285
Ser Ser Tyr Gly Gly Leu Leu Gly Asn Leu Leu Thr Ser Leu Met Gly
      290          295          300
Ser Ser Glu Gln Glu Asp Gly Glu Glu Ser Pro Ser Asp Gly Ser Pro
      305          310          315          320
Ile Glu Leu Asp

```

<210> 3607
 <211> 1726
 <212> DNA
 <213> Homo sapiens

<400> 3607

nacgcgtcgt gggagttggt ggaccccaca ccggacttgc aggcactggt tgttcagttt
60
aacgaccaat tcttctgggg ccagctggag gccgtcgagg tgaagtggag cgtgcgaatg
120
accctgtgtg ctgggatatg cagctatgaa gggaaggggtg gaatgtgttc catccgtctc
180
agcgaacccc ttttgaagtt gaggccaaga aaggatcttg tagagaccct cctgcatgaa
240
atgatacatg cctatatttatt tgtcactaat aacgacaaag accgagaagg gcatgggtcca
300
gaatttttga aacatatgca tcgcatcaac agcctgactg gagccaatat aacgggtatac
360
catacttttc acgatgaggt ggatgagtat cggcgacact ggtggcgctg caatgggccc
420
tgccagcaca ggccaccgta ttacggctat gtcaaacgag ctactaacag ggaaccctct
480
gctcatgact attggtgggc tgagcaccag aaaacctgtg gaggcactta cataaaaatc
540
aaggaaccag agaattactc aaaaaaaggc aaaggaaagg caaaactagg aaaggaacca
600
gtattggccg cagagaataa agataaaccc aacagaggtg aggccagct agtaatccct
660
tttagtggga aaggatatgt tctaggagaa acaagcaatt taccttcacc tgggaaactg
720
atcacttcac atgccattaa taaaacccaa gatcttttaa atcaaaacca ttcagcaa
780
gctgtaagac ctaattctaa aatcaaggtg aaatttgaac agaatgggtc aagtaaaaat
840
tctcatctgg tctccctgc tgtagtaac agtcaccaa atgttctaag caactacttt
900
cctagagtat catttgccaa ccaaaaggct ttcagaggtg tgaatggatc tccaaggata
960
agtgtaacag ttggcaacat ccctaaaaac tcagtctctt ctagtctctca gagaagggtt
1020
tcactttcta agatatccct aagaaattct tcaaaagtaa cggaatcagc atctgtgatg
1080
ccatcccagg atgtgagtgg gtctgaagat acattcccaa ataaacgacc taggctagaa
1140
gataagactg tttttgacaa tttttttatc aagaaagagc aaataaaaag cagtggtaat
1200
gatccaaagt atagtacaac cacagctcag aattccagca gttcatccag tcagagcaaa
1260
atgggttaatt gccagtttg tcagaatgaa gttctgggag tctcagatta atgagcactt
1320
ggactggtgc cttgaaggtg acagcatcaa agtcaaaagc gaagaaagtc tttgaaaaag
1380
gtttcaaagt ctcaagtacc acctgtatta tctcactaat gtgctatgtc agccagtcag
1440
gaagtctctg ttaatactaa gatttgtagg ttataatcta gttcacataa ccaatagaaa
1500
gtgtcctatt ttatatatac gcatataaga ttgtaatttt aagatgtttt gtgtctcagg
1560
gtgctacatt cactcttgcc ttaggtatac tgtaaccag gttctgcctg tcgtgtataa
1620

tttttagata cttttgttct ttcttgetct taaggatttt aaaaacctgt taatcttttt
 1680
 atttgataac tttcctaaaa atattcatat ggggaatcct gtcaaa
 1726

<210> 3608

<211> 436

<212> PRT

<213> Homo sapiens

<400> 3608

Xaa	Ala	Ser	Trp	Glu	Leu	Val	Asp	Pro	Thr	Pro	Asp	Leu	Gln	Ala	Leu
1				5					10				15		
Phe	Val	Gln	Phe	Asn	Asp	Gln	Phe	Phe	Trp	Gly	Gln	Leu	Glu	Ala	Val
		20						25				30			
Glu	Val	Lys	Trp	Ser	Val	Arg	Met	Thr	Leu	Cys	Ala	Gly	Ile	Cys	Ser
		35					40					45			
Tyr	Glu	Gly	Lys	Gly	Gly	Met	Cys	Ser	Ile	Arg	Leu	Ser	Glu	Pro	Leu
	50					55					60				
Leu	Lys	Leu	Arg	Pro	Arg	Lys	Asp	Leu	Val	Glu	Thr	Leu	Leu	His	Glu
65					70					75				80	
Met	Ile	His	Ala	Tyr	Leu	Phe	Val	Thr	Asn	Asn	Asp	Lys	Asp	Arg	Glu
			85					90					95		
Gly	His	Gly	Pro	Glu	Phe	Cys	Lys	His	Met	His	Arg	Ile	Asn	Ser	Leu
			100					105					110		
Thr	Gly	Ala	Asn	Ile	Thr	Val	Tyr	His	Thr	Phe	His	Asp	Glu	Val	Asp
	115						120					125			
Glu	Tyr	Arg	Arg	His	Trp	Trp	Arg	Cys	Asn	Gly	Pro	Cys	Gln	His	Arg
	130				135						140				
Pro	Pro	Tyr	Tyr	Gly	Tyr	Val	Lys	Arg	Ala	Thr	Asn	Arg	Glu	Pro	Ser
145					150					155				160	
Ala	His	Asp	Tyr	Trp	Trp	Ala	Glu	His	Gln	Lys	Thr	Cys	Gly	Gly	Thr
			165						170				175		
Tyr	Ile	Lys	Ile	Lys	Glu	Pro	Glu	Asn	Tyr	Ser	Lys	Lys	Gly	Lys	Gly
		180					185					190			
Lys	Ala	Lys	Leu	Gly	Lys	Glu	Pro	Val	Leu	Ala	Ala	Glu	Asn	Lys	Asp
	195					200					205				
Lys	Pro	Asn	Arg	Gly	Glu	Ala	Gln	Leu	Val	Ile	Pro	Phe	Ser	Gly	Lys
	210				215						220				
Gly	Tyr	Val	Leu	Gly	Glu	Thr	Ser	Asn	Leu	Pro	Ser	Pro	Gly	Lys	Leu
225					230					235				240	
Ile	Thr	Ser	His	Ala	Ile	Asn	Lys	Thr	Gln	Asp	Leu	Leu	Asn	Gln	Asn
			245						250					255	
His	Ser	Ala	Asn	Ala	Val	Arg	Pro	Asn	Ser	Lys	Ile	Lys	Val	Lys	Phe
		260						265					270		
Glu	Gln	Asn	Gly	Ser	Ser	Lys	Asn	Ser	His	Leu	Val	Ser	Pro	Ala	Val
		275					280					285			
Ser	Asn	Ser	His	Gln	Asn	Val	Leu	Ser	Asn	Tyr	Phe	Pro	Arg	Val	Ser
	290					295					300				
Phe	Ala	Asn	Gln	Lys	Ala	Phe	Arg	Gly	Val	Asn	Gly	Ser	Pro	Arg	Ile
305				310						315				320	
Ser	Val	Thr	Val	Gly	Asn	Ile	Pro	Lys	Asn	Ser	Val	Ser	Ser	Ser	Ser
			325						330				335		
Gln	Arg	Arg	Val	Ser	Ser	Ser	Lys	Ile	Ser	Leu	Arg	Asn	Ser	Ser	Lys

340 345 350
 Val Thr Glu Ser Ala Ser Val Met Pro Ser Gln Asp Val Ser Gly Ser
 355 360 365
 Glu Asp Thr Phe Pro Asn Lys Arg Pro Arg Leu Glu Asp Lys Thr Val
 370 375 380
 Phe Asp Asn Phe Phe Ile Lys Lys Glu Gln Ile Lys Ser Ser Gly Asn
 385 390 395 400
 Asp Pro Lys Tyr Ser Thr Thr Thr Ala Gln Asn Ser Ser Ser Ser Ser
 405 410 415
 Ser Gln Ser Lys Met Val Asn Cys Pro Val Cys Gln Asn Glu Val Leu
 420 425 430
 Gly Val Ser Asp
 435

<210> 3609

<211> 1286

<212> DNA

<213> Homo sapiens

<400> 3609

ntcttgcaact taagttgccc ttgaagatgg ttntgccttg ggcttgaac cccgagggag
 60
 ttcagcttca ccaaatacat ccaagctttc cgtgcactga gagacatgct ggccgtggcc
 120
 tgcgtcaacc agtgggagca gctgaggggg ccgggtggca acgaggatgg gccacagaag
 180
 ctggacttgg aagctgatgc tgagcccaa gacctcgaga gtacgaacct cttggagagt
 240
 gaagctccca gggactatatt cctcaagttt gcctatatatt tggatttggga cagcgacaca
 300
 gcagacaagt tcctgcagct gntttggaac caaagggtgtc aagaggggtgc tgtgtcctat
 360
 caannctacc cttgtgcgc caccgcttc acccattgtg agcaggtgct gggcgagggg
 420
 gccctggacc gaggcaccta ctactgggag gtggagatta tcgagggctg ggtcagcatg
 480
 ggggtcatgg ccgcagactt ctccccacaa gagccctacg accgcggccg gctgggcccgc
 540
 aacgcccact cctgctgcct gcagtggaaat ggacgcagct tctccgtctg gtttcatggg
 600
 ctggagggctc ccctgccccca ccccttctcg cccacgggtg gggctctgcct ggaatacgtc
 660
 gaccgtgctt tggccttcta tgctgtacgg gacggcaaga tgagcctcct gcggaggctg
 720
 aaggcctccc ggccccgcgg ggggtggcatc ccggcctccc ccattgaccc cttccagagc
 780
 cgcttggaac gtcactttgc ggggctcttc acccacagac tcaagcctgc cttcttctcg
 840
 gagagtgtgg acgcccactt gcagatcggg cccctcaaga agtcctgcat atccgtgctg
 900
 aagaggaggt gatgccgggc acgggcgctc ctgctgccgt ctctgctcca ggaagctgcc
 960
 tcctctgggc cctctccttc gtctgggaag gcaccagcat gagtcccaca caccagcct
 1020

tctcatttct agaggcttcc acctttttat acactcagcc ttccctctcc caggcaggag
1080
gacccccaga ccctgttccc ctgcagacct cacttctggg agacagagct acagctggga
1140
cagctccaag ctaccctaac ccctccttcc ccagggttct agaatagtgt ctggcatgta
1200
gtagatgctc aataaacact tgtcgagggg cccgatctgc aagtgggggtc cgtcgaccgg
1260
ccgctaattt agtagtagta gtaggc
1286

<210> 3610

<211> 268

<212> PRT

<213> Homo sapiens

<400> 3610

Met	Leu	Ala	Val	Ala	Cys	Val	Asn	Gln	Trp	Glu	Gln	Leu	Arg	Gly	Pro
1				5					10					15	
Gly	Gly	Asn	Glu	Asp	Gly	Pro	Gln	Lys	Leu	Asp	Leu	Glu	Ala	Asp	Ala
			20					25					30		
Glu	Pro	Gln	Asp	Leu	Glu	Ser	Thr	Asn	Leu	Leu	Glu	Ser	Glu	Ala	Pro
			35				40					45			
Arg	Asp	Tyr	Phe	Leu	Lys	Phe	Ala	Tyr	Ile	Val	Asp	Leu	Asp	Ser	Asp
	50					55					60				
Thr	Ala	Asp	Lys	Phe	Leu	Gln	Leu	Xaa	Trp	Asn	Gln	Arg	Cys	Gln	Glu
65					70				75					80	
Gly	Ala	Val	Ser	Tyr	Gln	Xaa	Tyr	Pro	Leu	Ser	Pro	Thr	Arg	Phe	Thr
			85					90						95	
His	Cys	Glu	Gln	Val	Leu	Gly	Glu	Gly	Ala	Leu	Asp	Arg	Gly	Thr	Tyr
			100					105					110		
Tyr	Trp	Glu	Val	Glu	Ile	Ile	Glu	Gly	Trp	Val	Ser	Met	Gly	Val	Met
		115					120					125			
Ala	Ala	Asp	Phe	Ser	Pro	Gln	Glu	Pro	Tyr	Asp	Arg	Gly	Arg	Leu	Gly
	130					135				140					
Arg	Asn	Ala	His	Ser	Cys	Cys	Leu	Gln	Trp	Asn	Gly	Arg	Ser	Phe	Ser
145					150				155					160	
Val	Trp	Phe	His	Gly	Leu	Glu	Ala	Pro	Leu	Pro	His	Pro	Phe	Ser	Pro
			165					170					175		
Thr	Val	Gly	Val	Cys	Leu	Glu	Tyr	Ala	Asp	Arg	Ala	Leu	Ala	Phe	Tyr
		180					185					190			
Ala	Val	Arg	Asp	Gly	Lys	Met	Ser	Leu	Leu	Arg	Arg	Leu	Lys	Ala	Ser
	195					200						205			
Arg	Pro	Arg	Arg	Gly	Gly	Ile	Pro	Ala	Ser	Pro	Ile	Asp	Pro	Phe	Gln
	210				215					220					
Ser	Arg	Leu	Asp	Ser	His	Phe	Ala	Gly	Leu	Phe	Thr	His	Arg	Leu	Lys
225					230				235					240	
Pro	Ala	Phe	Phe	Leu	Glu	Ser	Val	Asp	Ala	His	Leu	Gln	Ile	Gly	Pro
			245					250						255	
Leu	Lys	Lys	Ser	Cys	Ile	Ser	Val	Leu	Lys	Arg	Arg				
			260					265							

<210> 3611

<211> 816

<212> DNA

<213> Homo sapiens

<400> 3611

tacgggggttc actattatgc agtgaaggac aagcagggca taccatgggtg gctggggcctg
 60
 agctacaaag ggatcttcca gtagtactac catgataaag tgaagccaag aaagatatctc
 120
 caatggagac agttggaaaa cctgtacttc agagaaaaga agttttccgt ggaagttcat
 180
 gacccacgca gggcttcagt gacaaggagg acgtttgggc acagcggcat tgcagtgcac
 240
 acgtggtatg catgtccggc attgatcaag tccatctggg ctatggccat aagccaacac
 300
 cagttctatc tggacagaaa gcagagtaag tccaaaatcc atgcagcacg cagcctgagt
 360
 gagatcgcca tcgacctgac cgagacgggg acgctgaaga cctcgaagct ggccaacatg
 420
 ggtagcaagg ggaagatcat cagcggcagc agcggcagcc tgctgtcttc aggttctcag
 480
 gaatcagata gctcgcagtc ggccaagaag gacatgctgg ctgccttgaa gtccaggcag
 540
 gaagctctgg aggaaacct gcgtcagagg ctggaggaac tgaagaagct gtgtctccga
 600
 gaagctgagc tcacgggcaa gctgccagta gaatatcccc tggatccagg ggaggaacca
 660
 cccattgttc ggagaagaat aggaacagcc ttcaaactgg atgaacagaa aatcctgccc
 720
 aaaggagagg aagctgaact ggaacgcctg gaacgagagt ttgccattca gtcccagatt
 780
 acggaggccg cccgccgcct agccagtgcac cccaac
 816

<210> 3612

<211> 272

<212> PRT

<213> Homo sapiens

<400> 3612

Tyr	Gly	Val	His	Tyr	Tyr	Ala	Val	Lys	Asp	Lys	Gln	Gly	Ile	Pro	Trp
1				5					10					15	
Trp	Leu	Gly	Leu	Ser	Tyr	Lys	Gly	Ile	Phe	Gln	Tyr	Asp	Tyr	His	Asp
			20					25					30		
Lys	Val	Lys	Pro	Arg	Lys	Ile	Phe	Gln	Trp	Arg	Gln	Leu	Glu	Asn	Leu
			35				40					45			
Tyr	Phe	Arg	Glu	Lys	Lys	Phe	Ser	Val	Glu	Val	His	Asp	Pro	Arg	Arg
			50			55					60				
Ala	Ser	Val	Thr	Arg	Arg	Thr	Phe	Gly	His	Ser	Gly	Ile	Ala	Val	His
65					70				75					80	
Thr	Trp	Tyr	Ala	Cys	Pro	Ala	Leu	Ile	Lys	Ser	Ile	Trp	Ala	Met	Ala
				85				90						95	
Ile	Ser	Gln	His	Gln	Phe	Tyr	Leu	Asp	Arg	Lys	Gln	Ser	Lys	Ser	Lys
			100					105					110		
Ile	His	Ala	Ala	Arg	Ser	Leu	Ser	Glu	Ile	Ala	Ile	Asp	Leu	Thr	Glu


```
<210> 3614
<211> 123
<212> PRT
<213> Homo sapiens
```

<400> 3614

```

Met Gln Ser Val Thr Arg Pro Gly Ile Pro Met Cys Ala Gln Leu Ala
 1           5           10           15
His Ser Ile Ile Val Pro Arg Lys Leu Leu Gln Phe Ile Lys Ser Ser
      20           25           30
Gly Leu Gly Ile Ser Leu Asn Ser Lys Arg Arg Lys Glu Glu Thr Phe
      35           40           45
Pro Thr Arg Cys Gly Cys Asp Ala Ser Gln Gly Pro Gln Gly His Cys
      50           55           60
Pro Arg Ala His Arg Pro Pro Leu Thr Ala Thr Gly Ala Trp Ile Arg
      65           70           75           80
Ser Tyr Ile Val Gln Ser Phe Arg Pro Leu Pro Trp Ser Thr Arg Thr
      85           90           95
Arg Ala Arg Ile Ser Gly Arg Ala His Thr His Ser Tyr Thr Arg Thr
      100           105           110
Gln Thr Arg Ser Glu Lys Ser Pro Pro Pro Pro
      115           120

```

<210> 3615

<211> 1388

<212> DNA

<213> Homo sapiens

<400> 3615

```

nnggcagagc ctcccgaaga aaagggagcc ggcgagcgcc tacgggagtc cggcggcagc
60
agccggtacc ggcaaccacg ggcagctctc aggggaatctc cgtcgtgagg ccagaggctc
120
cagtccccgc gagtccagat gcctgtccag cctccaagca aagacacaga agagatggaa
180
gcagaggggtg attctgctgc tgagatgaat ggggaggagg aagagagtga ggaggagcgg
240
agcggcagcc agacagagtc agaagaggag agctccgaga tggatgatga ggactatgag
300
cgacgccgca gcgagtgtgt cagtgaatg ctggacctag agaagcagtt ctcgagagcta
360
aaggagaagt tggttcaggga acgactgagt cagctgcggt tgcggctgga ggaagtgggg
420
gctgagagag cccctgaata cacggagccc cttggggggc tgcagcggag cctcaagatt
480
cgattcagg tggcagggat ctacaagggc ttctgtctgg atgtgatcag gaataagtac
540
gaatgtgagc tgcagggagc caaacagcac ctggagagtg agaagctgct gctctatgac
600
acgctgcagg gggagctgca ggagcggatc cagaggctgg aggaggaccg ccagagcctg
660
gacctcagct ctgaatggtg ggacgacaaa ctgcacgcca gaggcagctc caggtcttgg
720
gactccctgc cgcccagcaa gaggaagaag gcacctctgg tttctggccc atacatcgtg
780
tacatgcttc aagagatcgg catcctggag gactggacag ccatcaaaaa ggctagggca
840
gctgtgtccc ctcagaagag aaaatcggat gacaggcgga cccacaggcc ctcagggtc
900

```

tgcccagcca ggctcctgtg gtgctgctgg gccctccac tccatctggc actggcctgg
 960
 actcctctc tgccctctc gaggcctgca cagctgtggc cgtggagctg acctgaccag
 1020
 gcaaggctgc tgtctccatc cctgagccgc ctgccacctc ccactcctga agatccatct
 1080
 cttggggctc ccctgacaga gaagacagcc gaagtcaaag ccacatcctc ttgctgatgt
 1140
 tggatgcagg ctgtccggcc tcagggccag ggagccagtt tccactgtgc gggaactctg
 1200
 agtcagacgt gattatctgg gggctctgtcc accctggctg gatctggagg caagatgcca
 1260
 ggccccccag gtgttctcag ggcagttctt ggtgtctgct tctcagattc caaggactgg
 1320
 aattaaaacc tttcctggga ctctggaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 1380
 aaaaaaaaa
 1388

<210> 3616

<211> 290

<212> PRT

<213> Homo sapiens

<400> 3616

Met	Pro	Val	Gln	Pro	Pro	Ser	Lys	Asp	Thr	Glu	Glu	Met	Glu	Ala	Glu
1			5						10					15	
Gly	Asp	Ser	Ala	Ala	Glu	Met	Asn	Gly	Glu	Glu	Glu	Glu	Ser	Glu	Glu
			20					25					30		
Glu	Arg	Ser	Gly	Ser	Gln	Thr	Glu	Ser	Glu	Glu	Glu	Ser	Ser	Glu	Met
		35					40					45			
Asp	Asp	Glu	Asp	Tyr	Glu	Arg	Arg	Arg	Ser	Glu	Cys	Val	Ser	Glu	Met
	50					55					60				
Leu	Asp	Leu	Glu	Lys	Gln	Phe	Ser	Glu	Leu	Lys	Glu	Lys	Leu	Phe	Arg
65					70					75				80	
Glu	Arg	Leu	Ser	Gln	Leu	Arg	Leu	Arg	Leu	Glu	Glu	Val	Gly	Ala	Glu
				85					90					95	
Arg	Ala	Pro	Glu	Tyr	Thr	Glu	Pro	Leu	Gly	Gly	Leu	Gln	Arg	Ser	Leu
			100					105					110		
Lys	Ile	Arg	Ile	Gln	Val	Ala	Gly	Ile	Tyr	Lys	Gly	Phe	Cys	Leu	Asp
		115					120					125			
Val	Ile	Arg	Asn	Lys	Tyr	Glu	Cys	Glu	Leu	Gln	Gly	Ala	Lys	Gln	His
	130					135					140				
Leu	Glu	Ser	Glu	Lys	Leu	Leu	Tyr	Asp	Thr	Leu	Gln	Gly	Glu	Leu	
145					150				155					160	
Gln	Glu	Arg	Ile	Gln	Arg	Leu	Glu	Glu	Asp	Arg	Gln	Ser	Leu	Asp	Leu
			165						170					175	
Ser	Ser	Glu	Trp	Trp	Asp	Asp	Lys	Leu	His	Ala	Arg	Gly	Ser	Ser	Arg
			180					185					190		
Ser	Trp	Asp	Ser	Leu	Pro	Pro	Ser	Lys	Arg	Lys	Lys	Ala	Pro	Leu	Val
		195					200					205			
Ser	Gly	Pro	Tyr	Ile	Val	Tyr	Met	Leu	Gln	Glu	Ile	Gly	Ile	Leu	Glu
	210					215					220				
Asp	Trp	Thr	Ala	Ile	Lys	Lys	Ala	Arg	Ala	Ala	Val	Ser	Pro	Gln	Lys

225 230 235 240
 Arg Lys Ser Asp Asp Arg Arg Thr His Arg Pro Leu Arg Val Cys Pro
 245 250 255
 Ala Arg Leu Leu Trp Cys Cys Trp Ala Leu Pro Leu His Leu Ala Leu
 260 265 270
 Ala Trp Thr Pro Pro Leu Pro Ser Ser Arg Pro Ala Gln Leu Trp Pro
 275 280 285
 Trp Ser
 290

<210> 3617

<211> 804

<212> DNA

<213> Homo sapiens

<400> 3617

nnccaacctg catgagattc agtttggccg aaccttccag catcagcttc gagattcttg
 60
 ggctttaaca gcaagggaga ggtgcatggg atcaatggga cccaatgggg ccagactctg
 120
 aggatgggat ggtagtagtg aaggacatag gatgggggta gagtgtggag actttttgaa
 180
 atagtataga tgaatgccct gaggggactg tgaacaagct ctgcccctct taggaaatca
 240
 atggggaatc aactaaatta aataaaaaat ggggtcaaga ttaagaggca gggtcaccca
 300
 gggaatggtt taggtcctgg catctttgaa ggggttgaa gggctggcag gaggcactga
 360
 gggccctggg ccctgggcca ggtggtgaat tacagcgact cacggacagc agaagagatc
 420
 tgtgagagca gctccaagat gatcaccttc atcgacctgg caggccacca taagtaccta
 480
 cacaccacca tctttggcct cacatcatac tgccccgact gcgcctgct cctcgtcagt
 540
 gccaacactg ggattgctgg caccacaagg gaacatctgg ggctggccct ggccctgaaa
 600
 gtgcccttct tcatcggtgt cagcaagatc gacctatgtg ccaagaccac agtggagagg
 660
 acagtacgcc agctggagcg ggtcctcaag cagcctggct gccacaaggc ccccatgctg
 720
 gtcacctctg aggatgatgc cgtcactgct gccagcagc ttgctcagtc acccaatgtc
 780
 acccccatct tcacattgtc cagt
 804

<210> 3618

<211> 148

<212> PRT

<213> Homo sapiens

<400> 3618

Gly Pro Trp Ala Leu Gly Gln Val Val Asn Tyr Ser Asp Ser Arg Thr
 1 5 10 15
 Ala Glu Glu Ile Cys Glu Ser Ser Ser Lys Met Ile Thr Phe Ile Asp

	20		25		30										
Leu	Ala	Gly	His	His	Lys	Tyr	Leu	His	Thr	Thr	Ile	Phe	Gly	Leu	Thr
	35						40					45			
Ser	Tyr	Cys	Pro	Asp	Cys	Ala	Leu	Leu	Leu	Val	Ser	Ala	Asn	Thr	Gly
	50					55					60				
Ile	Ala	Gly	Thr	Thr	Arg	Glu	His	Leu	Gly	Leu	Ala	Leu	Ala	Leu	Lys
65					70					75				80	
Val	Pro	Phe	Phe	Ile	Val	Val	Ser	Lys	Ile	Asp	Leu	Cys	Ala	Lys	Thr
				85					90					95	
Thr	Val	Glu	Arg	Thr	Val	Arg	Gln	Leu	Glu	Arg	Val	Leu	Lys	Gln	Pro
			100				105						110		
Gly	Cys	His	Lys	Val	Pro	Met	Leu	Val	Thr	Ser	Glu	Asp	Asp	Ala	Val
	115					120					125				
Thr	Ala	Ala	Gln	Gln	Phe	Ala	Gln	Ser	Pro	Asn	Val	Thr	Pro	Ile	Phe
	130					135					140				
Thr	Leu	Ser	Ser												
145															

<210> 3619

<211> 948

<212> DNA

<213> Homo sapiens

<400> 3619

```

acgcgtcggc agaggtggct tcgtcccgcg gagtccaggc ttcagctcct ggcttctctt
60
ctttctctct agagatcaga tgctcggaact ccagctgagg gcatgtctta ctgggcacgc
120
aggtgtcctc tcttgagaag aactgtccat accatgggtg tggttaaggct ttcaccagtt
180
ctcaggatgc ccatagggat ggggtgaagcc tgcttggcct gtggtgcttt ccagtggccg
240
tcctctcatt agggccccac agtggcatta ggatgcacct ctcggcggtg ttcaacgccc
300
tcctggtgtc ggtgtgtgca gcggtcctgt ggaagcatgt gcggtgtcgt gagcatgcag
360
ccacactgga ggaggagctg gccctcagcc gacaggccac agagccagcc ccagcactga
420
ggatcgacta cccgaaggca ctgcagatcc tgatggaggg cggcacacac atggtgtgca
480
cgggccgcac gcacacagac cgcctctgcc gcttcaagtg gctctgctac tccaacgagg
540
ctgaggagtt catcttcttc catggcaaca cctctgtcat gctgccaac ctgggctccc
600
ggcgcttcca gccagccctg ctgcacctat ccaccgtgga ggaccacaac actcagtact
660
tcaacttcgt ggagctgcct gctgctgccc tgcgcttcat gcccaagccg gtgttcgtgc
720
cagacgtggc cctcatcgcc aaccgcttca accccgacaa cctcatgcac gtctttcatg
780
acgacctgct gccactcttc tacaccctgc ggcagtttcc cggcctggcc cagaggcac
840
ggctcttctt catggagggc tggggcgagg gtgcacactt cgacctctac aagctgctca
900

```

gccccaaagca gcctctcctg cgggcacagc tgaagaccct gggccggc
948

<210> 3620

<211> 159

<212> PRT

<213> Homo sapiens

<400> 3620

Trp	Arg	Ala	Ala	His	Thr	Trp	Cys	Ala	Arg	Ala	Ala	Arg	Thr	Gln	Thr
1				5					10					15	
Ala	Ser	Ala	Ala	Ser	Ser	Gly	Ser	Ala	Thr	Pro	Thr	Arg	Leu	Arg	Ser
			20					25					30		
Ser	Ser	Ser	Ser	Met	Ala	Thr	Pro	Leu	Ser	Cys	Cys	Pro	Thr	Trp	Ala
			35				40					45			
Pro	Gly	Ala	Ser	Ser	Gln	Pro	Cys	Ser	Thr	Tyr	Pro	Pro	Trp	Arg	Thr
			50			55					60				
Thr	Thr	Leu	Ser	Thr	Ser	Thr	Ser	Trp	Ser	Cys	Leu	Leu	Leu	Pro	Cys
65					70					75				80	
Ala	Ser	Cys	Pro	Ser	Arg	Cys	Ser	Cys	Gln	Thr	Trp	Pro	Ser	Ser	Pro
				85					90					95	
Thr	Ala	Ser	Thr	Pro	Thr	Thr	Ser	Cys	Thr	Ser	Phe	Met	Thr	Thr	Cys
			100					105					110		
Cys	His	Ser	Ser	Thr	Pro	Cys	Gly	Ser	Phe	Pro	Ala	Trp	Pro	Thr	Arg
			115				120					125			
His	Gly	Ser	Ser	Ser	Trp	Arg	Ala	Gly	Ala	Arg	Val	His	Thr	Ser	Thr
			130			135					140				
Ser	Thr	Ser	Cys	Ser	Ala	Pro	Ser	Ser	Leu	Ser	Cys	Gly	His	Ser	
145					150					155					

<210> 3621

<211> 2934

<212> DNA

<213> Homo sapiens

<400> 3621

cccggggcga gacggtgctt tcgcggcgtg tgcttgcagg agcgcacagt tcaggcgccg
60
ggacaagctg ttgggggtgtg agtgagctct ccagaatggc acatggctcc ggggtgcccg
120
ggttaaaagg aaggatttgc acaccttcca cttagggtc gggtaatccc aaacttcctc
180
ccttaattgg gcttgcagtg ctaaaaagca gatcggttctc tctgaggttt tcccaacagt
240
acctcaagaa aataacatct gttttttgta acgttccaca gtattcggaa ttggctacag
300
aacataataa gatccttgcc agcacattac agaataatttt tgttgaacct tcttgagaat
360
tcagagaaac tgctgagtga ccactgaacg aaaagatcta atcttaaggc ttacgcgtgt
420
tccatccacc acatcagaac aatgtcgtat gtttttgtaa atgattcttc tcagactaac
480
gtgcccttgc tgcaagcctg tattgatggg gactttaatt attccaagcg gcttttggaa
540

agtggctttg acccaaatat tcgtgacagc aggggcagaa caggccttca ccttgcagca
600
gctcgaggga atgtagacat ctgccagtta ctgcataaat tcggtgccga tcttctggcc
660
acagattatc aaggaaacac agctcttcac ctctgtggcc atgtggatac tatccaattt
720
ttggtttcca atggactcaa aattgatatt tgcaatcatc aagggtgtac ccctttagtt
780
ctggcaaagc gcagaggagt aaataaagat gtcattccgat tgctggaatc tttggaagaa
840
caggaggtga aaggatttaa cagaggaacc cactcgaaac tggagaccat gcaaacagct
900
gagagtgaat gtgccatgga aagccattca ctctcaatc ccaacctgca gcaaggtgaa
960
ggagtcctct ccagcttccg aaccacgtgg caggagtttg tggaggatct gggcttctgg
1020
agagtattgc tgttgatctt cgtcattgct ttgctgtctc ttggcattgc ttattatgtg
1080
agtggggtgc tacccttcgt ggaaaaccag cctgaactgg tgcattaaag gagctcatgg
1140
aagatgagga aattaatttc ctgtttcctg gcttccaatg tttgttctca gtttctcaga
1200
atttttctta gcgcaaagca gtgagggcag tacatgttct ttttgcatct ttaattattg
1260
taatcctttt agataatgat gtgttcattt gaactaacta catactatga tcaagtatat
1320
tgcatcctaa cgctacctct gactcaacct gactttgtag gaaagcctac acgtagcctt
1380
gtttgataaa aacacggaag tgactagaga atggaagata aaggaagaag ctaggaagtc
1440
cttgctatca aaaccttacc ctaatatagg accaattgaa gtattcaaaa agaaaaacag
1500
tatcttatat gattagtttt tgttggtggt tttgttttca tttatttttg caagagccac
1560
tttttattta ctttctctag ggataagaga taaaacttga agtacttttt tcaaattctg
1620
tgtgcaaatt agtattgtta gcattctatt ggcttatttt agtattttta agtctagtca
1680
caaaccaaac aaaacttttg aaaatgagct atattttggt caaagataat tgatttgatc
1740
ttatatttat ttgttttttag gataattttt gatctttttg taaactgctt tgcttggtta
1800
tatctgtgaa aaataaatga gttcattttg ttcaactttcc aattttcccg agtatcctag
1860
tcattcaaaga taacagttca tcagaattac agtcagaaaa tcctttttct actgaatagt
1920
tagcagggaa aaataattct gatatttaac tgtcataatt ctgtagtgct attatagtga
1980
aaaactcagt tctataagct agctgtgttg tcacagtttt atcatagttc ataattattt
2040
catgtgcaat cctattttga ggccctgtta gacttttaac aatcccatcc atatctgtaa
2100
ttctctgatg gcaagaatgg atggagcatt tctgagttaa cagtgtgga cagtatcgta
2160

ctgggtgtca taaactcttt atgaatggta atattatgta aattgaaatc tggccctcaa
 2220
 actatattgc agctttcagc agtatgtttg aaggcctctt ttgttaatga ttctgtaatg
 2280
 tatgaattat gttcttgagt ggttaaaaaa gaatatgaag gcttgataat tatttattgg
 2340
 gtaaagtcag gaaattgtag tgaaagaact aatgggtttg ttttttgga taaaggcacc
 2400
 taagctattg ctaattgaat tgctgctaga attagaaatt atgctttaga atagaattgg
 2460
 tatttctgtg attctttttg cttcttggtg ttttctcttg tatctatgta tctagtattg
 2520
 aggcctgtgc tttcatgtgg ctttatcctc tctttaatag ctgttgtaaa attcctgagt
 2580
 aactggctgc ttcaggatca gcttgagag tcttgctttt aggttagata caaacaaggt
 2640
 aaatcatagt tgggtgtaa cagcaaaaa acagctggct ttggaatgga gaacactaca
 2700
 attcaaattt gaagtatatt cagaagaaaa ctttgggaatt agctttacat ttgtttgtaa
 2760
 atctaaacaa atatgcaaaa ttggtcaaaa tgtaagtata tagcattttt aaagattaat
 2820
 gggttccttt atgtgctgat ttctttgtat tctgttctct gcattcatca ttcaggaata
 2880
 ccaccaataa atgtatttat atatccctta aaaaaaaaaa aaaaaaaaaa aaaa
 2934

<210> 3622

<211> 228

<212> PRT

<213> Homo sapiens

<400> 3622

Met	Ser	Tyr	Val	Phe	Val	Asn	Asp	Ser	Ser	Gln	Thr	Asn	Val	Pro	Leu
1				5					10					15	
Leu	Gln	Ala	Cys	Ile	Asp	Gly	Asp	Phe	Asn	Tyr	Ser	Lys	Arg	Leu	Leu
			20					25					30		
Glu	Ser	Gly	Phe	Asp	Pro	Asn	Ile	Arg	Asp	Ser	Arg	Gly	Arg	Thr	Gly
		35					40					45			
Leu	His	Leu	Ala	Ala	Ala	Arg	Gly	Asn	Val	Asp	Ile	Cys	Gln	Leu	Leu
		50				55					60				
His	Lys	Phe	Gly	Ala	Asp	Leu	Leu	Ala	Thr	Asp	Tyr	Gln	Gly	Asn	Thr
65					70					75				80	
Ala	Leu	His	Leu	Cys	Gly	His	Val	Asp	Thr	Ile	Gln	Phe	Leu	Val	Ser
			85					90						95	
Asn	Gly	Leu	Lys	Ile	Asp	Ile	Cys	Asn	His	Gln	Gly	Ala	Thr	Pro	Leu
		100					105						110		
Val	Leu	Ala	Lys	Arg	Arg	Gly	Val	Asn	Lys	Asp	Val	Ile	Arg	Leu	Leu
		115				120						125			
Glu	Ser	Leu	Glu	Glu	Gln	Glu	Val	Lys	Gly	Phe	Asn	Arg	Gly	Thr	His
		130				135					140				
Ser	Lys	Leu	Glu	Thr	Met	Gln	Thr	Ala	Glu	Ser	Glu	Ser	Ala	Met	Glu
145					150					155				160	
Ser	His	Ser	Leu	Leu	Asn	Pro	Asn	Leu	Gln	Gln	Gly	Glu	Gly	Val	Leu

				165					170					175					
Ser	Ser	Phe	Arg	Thr	Thr	Trp	Gln	Glu	Phe	Val	Glu	Asp	Leu	Gly	Phe				
			180					185					190						
Trp	Arg	Val	Leu	Leu	Leu	Ile	Phe	Val	Ile	Ala	Leu	Leu	Ser	Leu	Gly				
		195					200					205							
Ile	Ala	Tyr	Tyr	Val	Ser	Gly	Val	Leu	Pro	Phe	Val	Glu	Asn	Gln	Pro				
	210					215					220								
Glu	Leu	Val	His																
225																			

<210> 3623

<211> 586

<212> DNA

<213> Homo sapiens

<400> 3623

```

ctgtgtgcat tcaatgcgtg agctgcgacc taagcagaga tctaacaaga caatgaggca
60
gtgttccagg gtatccatta aaaccggcgt gggcaactac atgttgatta aaccttccga
120
ggcagcaaaa tgtgggcaca gcgccatgtc tgggttctgc agctgtttga tgatcctctt
180
gcggaatttc tccctcacac gattaaattc cattatgtcc atggggtcct cttcgatcca
240
aaacttatga aattcatgca tcaaatagca gaatgtttgc tgaaagtgag acaatgttgg
300
agcttctggg gcgatattgt agaaatgggt ttttagagct ccgctgacca gtagattata
360
tgccaggtca gttatattga tgcccacaat tgcaaatgag tacccaattg ctttatccat
420
ccttttcttc tccattctg ctttgcgtgaa ttgcttatt tcttctttag tgatatccct
480
gcatttcgga tgaagagagt cagacaggac ctgctgagct gctgtggcat ccctttccgc
540
gaaatactgc aaattgtaca gtcccagaag tccattcct cgaaag
586

```

<210> 3624

<211> 159

<212> PRT

<213> Homo sapiens

<400> 3624

Met	Gly	Leu	Leu	Gly	Leu	Tyr	Asn	Leu	Gln	Tyr	Phe	Ala	Glu	Arg	Asp				
1				5					10					15					
Ala	Thr	Ala	Ala	Gln	Gln	Val	Leu	Ser	Asp	Ser	Leu	His	Pro	Lys	Cys				
		20					25				30								
Arg	Asp	Ile	Thr	Lys	Glu	Glu	Ile	Ser	Lys	Phe	Ser	Lys	Ala	Glu	Trp				
	35					40					45								
Glu	Lys	Lys	Arg	Met	Asp	Lys	Ala	Ile	Gly	Tyr	Ser	Phe	Ala	Ile	Val				
	50				55				60										
Gly	Ile	Asn	Ile	Thr	Asp	Leu	Ala	Tyr	Asn	Leu	Leu	Val	Ser	Gly	Ala				
65				70				75				80							
Leu	Lys	Thr	His	Phe	Tyr	Asn	Ile	Ala	Pro	Glu	Ala	Pro	Thr	Leu	Ser				

				85						90					95				
His	Phe	Gln	Gln	Thr	Phe	Cys	Tyr	Leu	Met	His	Glu	Phe	His	Lys	Phe				
			100					105					110						
Trp	Ile	Glu	Glu	Asp	Pro	Met	Asp	Ile	Met	Glu	Phe	Asn	Arg	Val	Arg				
		115					120					125							
Glu	Lys	Phe	Arg	Lys	Arg	Ile	Ile	Lys	Gln	Leu	Gln	Asn	Pro	Asp	Met				
	130					135					140								
Ala	Leu	Cys	Pro	His	Phe	Ala	Ala	Ser	Glu	Gly	Leu	Ile	Asn	Met					
145					150					155									

<210> 3625

<211> 4799

<212> DNA

<213> Homo sapiens

<400> 3625

```

naaataaaca tcatcatcta tgtgtaatca aattcccata ttttcttctt ataaagaatt
60
tgcttttagtt tttcaataag gcattttttt gtcattccaaa catctcttcc ttttaaaatt
120
ttcttagagt taaaaccata aataagagga tttaaaccac taaaatgaca cgtgccaaaca
180
tcttcattca gccagacctg gtaaattcta tcaaaactag acagttaaata aagaaccacg
240
ttataaaaat attagccaaa aaaagactat tagataattc tgcaaactca aatatgaaac
300
tgtgctaaac aaaatatgtg caaagggtaca caagcataga gccacgttg ggggttatgct
360
cagattagtt ttaaagctcc ctctagtggg ttttaattcaa gagttgtcca cggtggtggt
420
gtttactttg aactcacacg agtcaaagaa aaataaaaata tgcacaacca cttcccaaaa
480
agggtgtctta tggagccggg gcttcatcgt gtccacaccc aggactgcct ggggtgtccc
540
tagggctggg ggggtggggag gacaaagaca aggccactgt cccaagtcct gggccaggca
600
acatcctgga gaccctcggg ctgagggttag gggcaagggc aacactgatg actccacgtc
660
ctcgtccaag gcctcagagg agccctgcca ggacctcagt gctttggagg aggtggtgag
720
agcaggccag gctgaggggc ctgccttgga aggcgagggt ctgaggggtg gggctgtaaa
780
gacagccctt tcatcaggaa gctggagctg aaaagcccta ataccctaa tccccaaact
840
cttggatccc gtccacaga cgagagtcct tgctcggcat cctccagcac aggtgctctg
900
gggtgggtccc agggccaggc actagagaag gaaaggggtg gttgtgccag tggcctgggc
960
tgctgatggg ggtataccca cactgccac catgttcac attgcagggc ccagtgggtg
1020
cagagaggaa ccagtggccc ccagagctgg ctgtggggcc gcggagggtca tcgaggccac
1080
agccatggac tccactctg ggccaggccc aaaggatgtg ctggtcccca ggactgggct
1140

```

ccccgaagc tggttcagtg tcagcggctg gggctgggtc acctggaaag ggtaaacagg
1200
ggccgaggtg gcgggagcac ctggtgccag gaaaggggtg agggactggg ctggtggggc
1260
aggcctggtc accagtgagt ccagggttcac cagggccgcg ttggggccca ggaaggactc
1320
aggtgttttc cgggcactgc tgggcttgct tgaggcgaca gtcaggggtt gagactcaaa
1380
ggggtcaggg ctggtagtgc cattgttttg ggatggcaga gaggtcacag attcggctgt
1440
tttttttgaa gtccgaaggc tgtcaaattc agaaaagtca tctttaattg taccattcag
1500
attactgaag agctcaaagg acccagagac agacacgggc ttggtggtgg agactgcgcc
1560
ccacgcgtca gaagctcttt tcccagcact ggaggcaggc tgctgtgaag ctgccaggg
1620
gtccgagttc ttggggacag attgtgcggt ggctccagtg ggcaccccc atgggtcaat
1680
ggaggcagct ggcttggtac caaacgatgg ccaggggtct gaagtactcg caggagccgc
1740
tggcccgcgc caggggttgg tctggttagt ggaggctgac gggccccagg gctctgcttt
1800
ctgggccgcg gggcccgagc tggggagagc atccattaaa tccaacagcg tagtctgctg
1860
tgggagagag ccatgctctt tcttttttgg aattttaact gtgtcccttc ggctttcttc
1920
cagggccatc tgtaatctga ggtcatcacc ccgctgagg cgttcttctt gctcagccac
1980
ttctctgctc atggcaagtg ccagctgcag ctgaagctcc tcttctccac tagtgtgggg
2040
ccgggcttgc tccagctcgg aggacactcg cggggaggtg gagccatggt aggaggccgg
2100
ggagcccccg gccttgccat actcctgctc cgagtggctg gtggagaggt tgggctggct
2160
ggagcctcgc ccaaagggtga tctggttgct gcccatgcca gtggcaacct gggccatgcg
2220
ctctttgggt ttgagagcct gggccctctc agccttcaac cgttcctcgt cgcgcagcag
2280
ggccaccagt tgetttgact tctcacgcac attgatgccc tggtccttgc catctcggtc
2340
aatgtactgg aagtccttca gggctctggat ggcgtacatg ttctcccggc actgctgcga
2400
cacgcgtcc gagcctgtct tgatgaggta gtccagcagc gtcagcgcct tgtacacatg
2460
ccgccagttc ttgccatggt cattcagccg cttccacacc atgctcatga tctccgagaa
2520
ggccaccacg ttgtaggtca ggtcggcaat ctcggtcac agagaactgg acggggccca
2580
ggggtcattg gaggtggctt cccggacttt gatttctgcc tctgagtaat tgttcacgat
2640
gtccagcacc tgccgcagcc ttcgtccggg agtcgcccc tctctccacg catcggggcc
2700
ctgtgcccct tgctgctgca gccgggcacc atgtcgacct cgtccttgag gcgccagatg
2760

aagaacatcg tccacaacta ctacagaggcg gagatcaagg ttcgagaggc cacgagcaat
2820
gacccctggg gcccatccag ctccctcatg tcagagattg ccgacctcac ctacaacgtt
2880
gtcgccttct cggagatcat gagcatgatc tggaagcggc tcaatgacca tggcaagaac
2940
tggcgtcacg tttacaaggc catgacgctg atggagtacc tcatcaagac cggctcggag
3000
cgcgtgtcgc agcagtgcaa ggagaacatg tacgccgtgc agacgctgaa ggacttccag
3060
tacgtggacc gcgacggcaa ggaccagggc gtgaacgtgc gtgagaaagc taagcagctg
3120
gtggccctgc tgcgcgacga ggaccggctg cgggaagagc gggcgcacgc gctcaagacc
3180
aaggaaaagc tggcacagac cgccacggcc tcatcagcag ctgtgggctc agggccccct
3240
cccgaggcgg agcaggcgtg gccgcagagc agcggggagg aggagctgca gctccagctg
3300
gccctggcca tgagcaagga ggaggccgac caggaggagc ggatccgtcg cggggatgac
3360
ctgcggctgc agatggcaat cgaggagagc aagagggaga ctgggggcaa ggaggagtgc
3420
tcctcatgg accttctga cgtcttcaag gccccagctc ctgccccgac cacagacccc
3480
tgggggggccc cagcaccat ggctgctgcc gtccccacgg ctgccccac ctcggacccc
3540
tggggcggccc cccctgtccc tccagctgct gatccctggg gaggtccagc cccacgccc
3600
gcctctgggg accctggag gcctgctgcc cctgcaggac cctcagttga cccttgggg
3660
gggaccccag cccctgcagc tggggagggg cccacgcctg atccatgggg aagttccgat
3720
ggtgggggtcc cggtcagtgg gccctcagcc tccgatccct ggacaccggc cccggccttc
3780
tcagatccct ggggagggtc acctgccaag cccagcacca atggcacaac aacagccggg
3840
ggattcgaca cggagcccga cgagttctct gactttgacc gactccgcac ggcactgccg
3900
acctccggga gcagcgagg agagctggag ctgctggcag gagaggtgcc ggcccgaagc
3960
cctggggcgt ttgacatgag tggggtcagg ggatctctgg ctgaggctgt gggcagcccc
4020
ccacctgcag ccacaccaac tcccacgccc cccaccgga agacgcccga gtcattcctg
4080
gggcccattg cagccctcgt cgacctggac tcgctgggtga gccggccggg cccacgccc
4140
cctggagcca aggcctccaa ccccttctct ccaggcggag gccagccac tggcccttc
4200
gtcaccaacc ccttccagcc cgcgcctccc gcgacgctca ccctgaacca gctccgtctc
4260
agtccgtgct ctcctgtccc tggagcgcca cccacgtaca tctctccct tggcggggg
4320
cctggcctgc ccccatgat gccccgggg ccccgggccc ccaacactaa tcccttctc
4380

ctataatcca gggcggaatg gggcctggct ccatecgget gccccattcc ggctccctgg
 4440
 gagatcagtg ttgtgagtgc atgtgaaatg gggatcccca ccccatgggc ccttccctt
 4500
 cctggggccc actcacacta caccctcttc ctttcccacc ccacctcccc ggagagaaac
 4560
 tggacatggg gcctggggag gggagctggc cagaggagga cccctttccc gtggcattag
 4620
 aagggggagg ggtgctgggg accccacca tttccctcc ctccaaactc ccaaccccca
 4680
 gtcagtgttt gagcctcctc gttccctca cgcaccgctc acgcaccctc ggtgaatcct
 4740
 tggatgatg tttggcaact ttgggaataa atggcaattc ccacgggctt ggcaaaaaa
 4799

<210> 3626

<211> 551

<212> PRT

<213> Homo sapiens

<400> 3626

Met	Ser	Thr	Ser	Ser	Leu	Arg	Arg	Gln	Met	Lys	Asn	Ile	Val	His	Asn
1				5					10					15	
Tyr	Ser	Glu	Ala	Glu	Ile	Lys	Val	Arg	Glu	Ala	Thr	Ser	Asn	Asp	Pro
		20						25					30		
Trp	Gly	Pro	Ser	Ser	Ser	Leu	Met	Ser	Glu	Ile	Ala	Asp	Leu	Thr	Tyr
		35					40					45			
Asn	Val	Val	Ala	Phe	Ser	Glu	Ile	Met	Ser	Met	Ile	Trp	Lys	Arg	Leu
	50					55					60				
Asn	Asp	His	Gly	Lys	Asn	Trp	Arg	His	Val	Tyr	Lys	Ala	Met	Thr	Leu
	65				70				75					80	
Met	Glu	Tyr	Leu	Ile	Lys	Thr	Gly	Ser	Glu	Arg	Val	Ser	Gln	Gln	Cys
			85					90						95	
Lys	Glu	Asn	Met	Tyr	Ala	Val	Gln	Thr	Leu	Lys	Asp	Phe	Gln	Tyr	Val
		100					105						110		
Asp	Arg	Asp	Gly	Lys	Asp	Gln	Gly	Val	Asn	Val	Arg	Glu	Lys	Ala	Lys
		115				120						125			
Gln	Leu	Val	Ala	Leu	Leu	Arg	Asp	Glu	Asp	Arg	Leu	Arg	Glu	Glu	Arg
	130					135					140				
Ala	His	Ala	Leu	Lys	Thr	Lys	Glu	Lys	Leu	Ala	Gln	Thr	Ala	Thr	Ala
	145				150				155					160	
Ser	Ser	Ala	Ala	Val	Gly	Ser	Gly	Pro	Pro	Glu	Ala	Glu	Gln	Ala	
			165					170						175	
Trp	Pro	Gln	Ser	Ser	Gly	Glu	Glu	Glu	Leu	Gln	Leu	Gln	Leu	Ala	Leu
		180					185						190		
Ala	Met	Ser	Lys	Glu	Glu	Ala	Asp	Gln	Glu	Glu	Arg	Ile	Arg	Arg	Gly
	195					200						205			
Asp	Asp	Leu	Arg	Leu	Gln	Met	Ala	Ile	Glu	Glu	Ser	Lys	Arg	Glu	Thr
	210				215						220				
Gly	Gly	Lys	Glu	Glu	Ser	Ser	Leu	Met	Asp	Leu	Ala	Asp	Val	Phe	Thr
	225				230				235					240	
Ala	Pro	Ala	Pro	Ala	Pro	Thr	Thr	Asp	Pro	Trp	Gly	Gly	Pro	Ala	Pro
			245					250						255	
Met	Ala	Ala	Ala	Val	Pro	Thr	Ala	Ala	Pro	Thr	Ser	Asp	Pro	Trp	Gly

260 265 270
 Gly Pro Pro Val Pro Pro Ala Ala Asp Pro Trp Gly Gly Pro Ala Pro
 275 280 285
 Thr Pro Ala Ser Gly Asp Pro Trp Arg Pro Ala Ala Pro Ala Gly Pro
 290 295 300
 Ser Val Asp Pro Trp Gly Gly Thr Pro Ala Pro Ala Ala Gly Glu Gly
 305 310 315 320
 Pro Thr Pro Asp Pro Trp Gly Ser Ser Asp Gly Gly Val Pro Val Ser
 325 330 335
 Gly Pro Ser Ala Ser Asp Pro Trp Thr Pro Ala Pro Ala Phe Ser Asp
 340 345 350
 Pro Trp Gly Gly Ser Pro Ala Lys Pro Ser Thr Asn Gly Thr Thr Thr
 355 360 365
 Ala Gly Gly Phe Asp Thr Glu Pro Asp Glu Phe Ser Asp Phe Asp Arg
 370 375 380
 Leu Arg Thr Ala Leu Pro Thr Ser Gly Ser Ser Ala Gly Glu Leu Glu
 385 390 395 400
 Leu Leu Ala Gly Glu Val Pro Ala Arg Ser Pro Gly Ala Phe Asp Met
 405 410 415
 Ser Gly Val Arg Gly Ser Leu Ala Glu Ala Val Gly Ser Pro Pro Pro
 420 425 430
 Ala Ala Thr Pro Thr Pro Thr Pro Pro Thr Arg Lys Thr Pro Glu Ser
 435 440 445
 Phe Leu Gly Pro Asn Ala Ala Leu Val Asp Leu Asp Ser Leu Val Ser
 450 455 460
 Arg Pro Gly Pro Thr Pro Pro Gly Ala Lys Ala Ser Asn Pro Phe Leu
 465 470 475 480
 Pro Gly Gly Gly Pro Ala Thr Gly Pro Ser Val Thr Asn Pro Phe Gln
 485 490 495
 Pro Ala Pro Pro Ala Thr Leu Thr Leu Asn Gln Leu Arg Leu Ser Pro
 500 505 510
 Val Pro Pro Val Pro Gly Ala Pro Pro Thr Tyr Ile Ser Pro Leu Gly
 515 520 525
 Gly Gly Pro Gly Leu Pro Pro Met Met Pro Pro Gly Pro Pro Ala Pro
 530 535 540
 Asn Thr Asn Pro Phe Leu Leu
 545 550

<210> 3627

<211> 1760

<212> DNA

<213> Homo sapiens

<400> 3627

ggcgaaggag atcagcagga cgctgcgcac aacatgggca accacctgcc gctcctgcct
 60
 gcagagagtg aggaagaaga tgaaatggaa gttgaagacc aggatagtaa agaagccaaa
 120
 aaaccaaaca tcataaattt tgacaccagt ctgccgacat cacatacata cctagggtgct
 180
 gatatggaag aatttcattg caggactttg cacgatgacg acagctgtca ggtgattcca
 240
 gttcttcac aagtgatgat gatcctgatt cccggacaga cattacctct tcagcttttt
 300

caccctcaag aagtcagtat ggtgcggaat ttaattcaga aagatagaac ctttgctggt
360
cttgcataca gcaatgtaca ggaaagggaa gcacagtttg gaacaacagc agagatatat
420
gcctatcgag aagaacagga ttttggaatt gagatagtga aagtgaagc aattggaaga
480
caaaggttca aagtccttga gctaagaaca cagtcagatg gaatccagca agctaaagtg
540
caaattcttc ccgaatgtgt gttgccttca accatgtctg cagttcaatt agaatccctc
600
aataagtgcc agatatttcc ttcaaacct gtctcaagag aagaccaatg ttcataataa
660
tggtggcaga aataccagaa gagaaagttt cattgtgcaa atctaacttc atggcctcgc
720
tggtctgtatt ccttatatga tgctgagacc ttaatggaca gaatcaagaa acagctacgt
780
gaatgggatg aaaatctaaa agatgattct cttccttcaa atccaataga tttttcttac
840
agagtagctg cttgtcttcc tattgatgat gtattgagaa ttcagctcct taaaattggc
900
agtgcctatcc agcgacttcg ctgtgaatta gacattatga ataaatgtac ttccctttgc
960
tgtaacaat gtcaagaaac agaaataaca accaaaaatg aaatattcag tttatcctta
1020
tgtgggccga tggcagctta tgtgaatcct catggatatg tgcagagac acttactgtg
1080
tataaggctt gcaacttgaa tctgataggc cggccttcta cagaacacag ctgggttctc
1140
gggtatgcct ggactgttgc ccagtgtgaag atctgtgcaa gccatattgg atggaagttt
1200
acggccacca aaaaagacat gtcacctcaa aaattttggg gcttaacgcg atctgctctg
1260
ttgcccacga tcccagacac tgaagatgaa ataagtccag acaaagtaat actttgcttg
1320
taaacagatg tgatagagat aaagttagtt atctaacaaa ttgggttatat tctaagatct
1380
gctttggaaa ttattgcctc tgatacatat ctaagtaaac ataacattaa tacctaagta
1440
aacataacat tacttggagg gttgcagttt ctaagtgaac ctgtatttga aacttttaag
1500
tatacttttag gaaacaagca tgaacggcag tctagaatac cagaaacatc tacttgggta
1560
gcttggtgcc attatcctgt ggaatctgat atgtctggta gcatgtcatt gatgggacat
1620
gaagacatct ttggaaatga tgagattatt tcctgtatgc agtcatttct gaggctttct
1680
tgcacatag ccctgtgac atttctctct agaaatatta cactctacaa aattgtttta
1740
tcaaggtcca aaattactat
1760

<210> 3628

<211> 440

<212> PRT

<213> Homo sapiens

<400> 3628

Gly Glu Gly Asp Gln Gln Asp Ala Ala His Asn Met Gly Asn His Leu
 1 5 10 15
 Pro Leu Leu Pro Ala Glu Ser Glu Glu Glu Asp Glu Met Glu Val Glu
 20 25 30
 Asp Gln Asp Ser Lys Glu Ala Lys Lys Pro Asn Ile Ile Asn Phe Asp
 35 40 45
 Thr Ser Leu Pro Thr Ser His Thr Tyr Leu Gly Ala Asp Met Glu Glu
 50 55 60
 Phe His Gly Arg Thr Leu His Asp Asp Asp Ser Cys Gln Val Ile Pro
 65 70 75 80
 Val Leu Pro Gln Val Met Met Ile Leu Ile Pro Gly Gln Thr Leu Pro
 85 90 95
 Leu Gln Leu Phe His Pro Gln Glu Val Ser Met Val Arg Asn Leu Ile
 100 105 110
 Gln Lys Asp Arg Thr Phe Ala Val Leu Ala Tyr Ser Asn Val Gln Glu
 115 120 125
 Arg Glu Ala Gln Phe Gly Thr Thr Ala Glu Ile Tyr Ala Tyr Arg Glu
 130 135 140
 Glu Gln Asp Phe Gly Ile Glu Ile Val Lys Val Lys Ala Ile Gly Arg
 145 150 155 160
 Gln Arg Phe Lys Val Leu Glu Leu Arg Thr Gln Ser Asp Gly Ile Gln
 165 170 175
 Gln Ala Lys Val Gln Ile Leu Pro Glu Cys Val Leu Pro Ser Thr Met
 180 185 190
 Ser Ala Val Gln Leu Glu Ser Leu Asn Lys Cys Gln Ile Phe Pro Ser
 195 200 205
 Lys Pro Val Ser Arg Glu Asp Gln Cys Ser Tyr Lys Trp Trp Gln Lys
 210 215 220
 Tyr Gln Lys Arg Lys Phe His Cys Ala Asn Leu Thr Ser Trp Pro Arg
 225 230 235 240
 Trp Leu Tyr Ser Leu Tyr Asp Ala Glu Thr Leu Met Asp Arg Ile Lys
 245 250 255
 Lys Gln Leu Arg Glu Trp Asp Glu Asn Leu Lys Asp Asp Ser Leu Pro
 260 265 270
 Ser Asn Pro Ile Asp Phe Ser Tyr Arg Val Ala Ala Cys Leu Pro Ile
 275 280 285
 Asp Asp Val Leu Arg Ile Gln Leu Leu Lys Ile Gly Ser Ala Ile Gln
 290 295 300
 Arg Leu Arg Cys Glu Leu Asp Ile Met Asn Lys Cys Thr Ser Leu Cys
 305 310 315 320
 Cys Lys Gln Cys Gln Glu Thr Glu Ile Thr Thr Lys Asn Glu Ile Phe
 325 330 335
 Ser Leu Ser Leu Cys Gly Pro Met Ala Ala Tyr Val Asn Pro His Gly
 340 345 350
 Tyr Val His Glu Thr Leu Thr Val Tyr Lys Ala Cys Asn Leu Asn Leu
 355 360 365
 Ile Gly Arg Pro Ser Thr Glu His Ser Trp Phe Pro Gly Tyr Ala Trp
 370 375 380
 Thr Val Ala Gln Cys Lys Ile Cys Ala Ser His Ile Gly Trp Lys Phe
 385 390 395 400
 Thr Ala Thr Lys Lys Asp Met Ser Pro Gln Lys Phe Trp Gly Leu Thr

405 410 415
 Arg Ser Ala Leu Leu Pro Thr Ile Pro Asp Thr Glu Asp Glu Ile Ser
 420 425 430
 Pro Asp Lys Val Ile Leu Cys Leu
 435 440

<210> 3629
 <211> 695
 <212> DNA
 <213> Homo sapiens

<400> 3629
 acgcgtcccc tgtccggctt ggtatgggtc gcgctgctag cgctaggcca cgccttctctg
 60
 ttcaccgggg gcggtggtgag cgcctgggac cagggtgtcct attttctctt cgtcatcttc
 120
 acggcgatatg ccatgctgcc cttgggcatg cgggaacgac cgcgcgagg cctcgctctc
 180
 tcaactctgc atctgctggt cctcgggctg tatcttgggc cacagccgga ctcacggcct
 240
 gcactgctgc cgcagttggc agcaaacgca gtgctgttcc tgtgcgggaa cgtggcagga
 300
 gtgtaccaca aggcgctgat ggagcgcgcc ctgcgggcca cgttcgggga ggcactcagc
 360
 tccctgcact cacgccggcg gctggacacc gagaagaagc accaggtcag cggggcctag
 420
 gaaggtcaga gcagcgctcc gagggaggag ttgcttagat tacataacgg ggctcctcca
 480
 caagttgagt gactctgggc aggtttcttg acctgtttct tcttttgtat aaaatgtggg
 540
 tattgcccat cttagaaggt tgtgaggctc aaacaaacca aagcttataa aaagcacttt
 600
 agagcattat gatattaagt gaactcccat tcaggtgttg atactgggag tttagtcact
 660
 aaaggtgatc agtgtaggat ggagtgctgg ggccc
 695

<210> 3630
 <211> 139
 <212> PRT
 <213> Homo sapiens

<400> 3630
 Thr Arg Pro Leu Ser Gly Leu Val Trp Val Ala Leu Leu Ala Leu Gly
 1 5 10 15
 His Ala Phe Leu Phe Thr Gly Gly Val Val Ser Ala Trp Asp Gln Val
 20 25 30
 Ser Tyr Phe Leu Phe Val Ile Phe Thr Ala Tyr Ala Met Leu Pro Leu
 35 40 45
 Gly Met Arg Asp Ala Ala Val Ala Gly Leu Ala Ser Ser Leu Ser His
 50 55 60
 Leu Leu Val Leu Gly Leu Tyr Leu Gly Pro Gln Pro Asp Ser Arg Pro
 65 70 75 80
 Ala Leu Leu Pro Gln Leu Ala Ala Asn Ala Val Leu Phe Leu Cys Gly

```

<400> 3632
Met Gln Tyr Leu Glu Lys Arg Lys Asn Pro Val Cys His Phe Val Thr
  1                      5                      10                      15
Pro Leu Asp Gly Ser Val Asp Val Asp Glu His Arg Arg Pro Glu Ala

```

```
<210> 3633
<211> 1570
<212> DNA
<213> Homo sapiens
```

2789

aacatgaagc agccgttggc agatacgctt gtgcaggggtg gggatatggag aatcaagtgg
 720
 caccctttcc accaccacct gctcctggcc gcttgcacgc acagtggctt taagatcctc
 780
 aactgcaaaa aggcaatgga ggagaggcag gaggcgacgg tcctgacatc tcacacattg
 840
 cccgactcgc tgggtgatgg agccgactgg tcctggctgc tcttccgttc tctgcagcgg
 900
 gccccctcgt ggtcctttcc tagcaacctt ggaaccaaga cggcagacct gaaggggtgca
 960
 agcgagttgc caacaccctg tcatgaatgc agagaggata acgatgggga gggccatgcc
 1020
 agaccccaga gtggaatgaa gccactcaca gagggcacga ggaagaatgg cacctggctg
 1080
 caggctacag cagccaccac acgtgactgt ggcgtgaacc cagaagaagc agactcagcc
 1140
 ttcagcctcc tggccacctg ctcttcttat gaccatgcgc tccacctctg ggagtgggag
 1200
 gggaaactgag cttgaaatca tgaagccctt tcccacaagg aaaccaggag ggagactgag
 1260
 agtgagtgcc cgggaccacc tcatcagaga tgcttactgc agccctgcag gtgcctgtgc
 1320
 actgatggaa tccacagtgt agtcagaaaa gctgttgact tctcttaaata cagcttccct
 1380
 gctgggcccc tgaaagtgga ctgggtgatt ctgtctggca gagagtgggg aaaagacgag
 1440
 gtttccagct tgcagatttg ttaagtttct caggcagatt ttgactttca gcctttcata
 1500
 cttgttttaag caactatttg tattaaatga agttttttga aaaaaaaaaa aaaaaaaaaa
 1560
 aaaaaaaaaa
 1570

<210> 3634

<211> 277

<212> PRT

<213> Homo sapiens

<400> 3634

Met	Val	Asn	Glu	Thr	Arg	Pro	Arg	Leu	Gln	Lys	Val	Ala	Ser	Trp	Gln
1				5				10						15	
Ala	His	Gln	Phe	Glu	Ala	Trp	Ile	Ala	Ala	Phe	Asn	Tyr	Trp	His	Pro
		20					25					30			
Glu	Ile	Val	Tyr	Ser	Gly	Gly	Asp	Asp	Gly	Leu	Leu	Arg	Gly	Trp	Asp
	35					40					45				
Thr	Arg	Val	Pro	Gly	Lys	Phe	Leu	Phe	Thr	Ser	Xaa	Lys	Thr	His	His
	50				55				60						
Xaa	Gly	Val	Cys	Ser	Ile	Gln	Ser	Ser	Pro	His	Arg	Glu	His	Ile	Leu
65				70				75						80	
Ala	Thr	Gly	Ser	Tyr	Asp	Glu	His	Ile	Leu	Leu	Trp	Asp	Thr	Arg	Asn
		85				90							95		
Met	Lys	Gln	Pro	Leu	Ala	Asp	Thr	Pro	Val	Gln	Gly	Gly	Val	Trp	Arg
		100					105						110		
Ile	Lys	Trp	His	Pro	Phe	His	His	His	Leu	Leu	Leu	Ala	Ala	Cys	Met

```

      115      120      125
His Ser Gly Phe Lys Ile Leu Asn Cys Gln Lys Ala Met Glu Glu Arg
      130      135      140
Gln Glu Ala Thr Val Leu Thr Ser His Thr Leu Pro Asp Ser Leu Val
      145      150      155      160
Tyr Gly Ala Asp Trp Ser Trp Leu Leu Phe Arg Ser Leu Gln Arg Ala
      165      170      175
Pro Ser Trp Ser Phe Pro Ser Asn Leu Gly Thr Lys Thr Ala Asp Leu
      180      185      190
Lys Gly Ala Ser Glu Leu Pro Thr Pro Cys His Glu Cys Arg Glu Asp
      195      200      205
Asn Asp Gly Glu Gly His Ala Arg Pro Gln Ser Gly Met Lys Pro Leu
      210      215      220
Thr Glu Gly Met Arg Lys Asn Gly Thr Trp Leu Gln Ala Thr Ala Ala
      225      230      235      240
Thr Thr Arg Asp Cys Gly Val Asn Pro Glu Glu Ala Asp Ser Ala Phe
      245      250      255
Ser Leu Leu Ala Thr Cys Ser Phe Tyr Asp His Ala Leu His Leu Trp
      260      265      270
Glu Trp Glu Gly Asn
      275

```

<210> 3635
 <211> 835
 <212> DNA
 <213> Homo sapiens

```

<400> 3635
ngaattcaac ttcagcaaca gcagcaacag tcttgccaac acctgggatt actaactcct
60
gttgagttg gagagcagct ttctgagggga gactatgcac gggttacagca agtggatcct
120
gttttactta aagatgaacc ccagcagact gctgctcaga tgggttgtgc gccaatccag
180
cctctggcga tgcctcaagc tttgcctctg gcggcagggtc ccttgccctcc aggggtccatc
240
gcaaactctta cagaactgca aggagtgata gttggacagc cagtactggg ccaagcacag
300
ttggcagggc tggggcaagg aattctgaca gaaacacaac aagggttaat ggtagccagc
360
cctgctcaga ccctcaatga cacgctggat gacatcatgg cagcagtcag tggaagagca
420
tctgcaatgt caaacactcc taccacagct attgctgcat ccatttccca acctcagact
480
ccaactccaa gtccatcat ctctccttca gccatgcttc ctatctaccc tgccattgat
540
attgatgcac agactgagag taatcatgac acggcgctaa cacttgcttg tgctgggtggc
600
cacgaggaac tgggtacaaac actgctagag agaggagcta gtatagagca ccgagacaag
660
aaagggttta ctccactcat cttggctgcc acagctgggtc atgttggtgt tgtggaaata
720
ttgctggaca atggtgcaga cattgaagcc cagtctgaaa gaaccaagga cacaccactc
780

```

tccttggtt gttctggggg aagacaggag gtggtggagc tattgttagc tcgag
835

<210> 3636

<211> 278

<212> PRT

<213> Homo sapiens

<400> 3636

Xaa	Ile	Gln	Leu	Gln	Gln	Gln	Gln	Gln	Ser	Cys	Gln	His	Leu	Gly
1			5					10					15	
Leu	Leu	Thr	Pro	Val	Gly	Val	Gly	Glu	Gln	Leu	Ser	Glu	Gly	Tyr
			20					25				30		
Ala	Arg	Leu	Gln	Gln	Val	Asp	Pro	Val	Leu	Leu	Lys	Asp	Glu	Pro
			35				40					45		
Gln	Thr	Ala	Ala	Gln	Met	Gly	Cys	Ala	Pro	Ile	Gln	Pro	Leu	Ala
	50					55					60			Met
Pro	Gln	Ala	Leu	Pro	Leu	Ala	Ala	Gly	Pro	Leu	Pro	Pro	Gly	Ser
65					70					75				80
Ala	Asn	Leu	Thr	Glu	Leu	Gln	Gly	Val	Ile	Val	Gly	Gln	Pro	Val
				85					90					95
Gly	Gln	Ala	Gln	Leu	Ala	Gly	Leu	Gly	Gln	Gly	Ile	Leu	Thr	Glu
			100					105					110	
Gln	Gln	Gly	Leu	Met	Val	Ala	Ser	Pro	Ala	Gln	Thr	Leu	Asn	Asp
		115					120					125		Thr
Leu	Asp	Asp	Ile	Met	Ala	Ala	Val	Ser	Gly	Arg	Ala	Ser	Ala	Met
130						135					140			Ser
Asn	Thr	Pro	Thr	His	Ser	Ile	Ala	Ala	Ser	Ile	Ser	Gln	Pro	Gln
145					150					155				160
Pro	Thr	Pro	Ser	Pro	Ile	Ile	Ser	Pro	Ser	Ala	Met	Leu	Pro	Ile
				165					170					175
Pro	Ala	Ile	Asp	Ile	Asp	Ala	Gln	Thr	Glu	Ser	Asn	His	Asp	Thr
			180					185				190		Ala
Leu	Thr	Leu	Ala	Cys	Ala	Gly	Gly	His	Glu	Glu	Leu	Val	Gln	Thr
		195					200					205		Leu
Leu	Glu	Arg	Gly	Ala	Ser	Ile	Glu	His	Arg	Asp	Lys	Lys	Gly	Phe
210					215					220				Thr
Pro	Leu	Ile	Leu	Ala	Ala	Thr	Ala	Gly	His	Val	Gly	Val	Val	Glu
225					230					235				Ile
Leu	Leu	Asp	Asn	Gly	Ala	Asp	Ile	Glu	Ala	Gln	Ser	Glu	Arg	Thr
			245						250					Lys
Asp	Thr	Pro	Leu	Ser	Leu	Ala	Cys	Ser	Gly	Gly	Arg	Gln	Glu	Val
			260					265					270	
Glu	Leu	Leu	Leu	Ala	Arg									
			275											

<210> 3637

<211> 2128

<212> DNA

<213> Homo sapiens

<400> 3637

nacgcgtgcg atccccggcg cccgcgcgcg cccatagcgc tccgccagag ctgccgcgcg
60

ggactcgccg ggagtggggg tctccgctgg tgccagcccg cttctggaga ccctccgcct
120
cctgcccaacc cctgctcttc caggctcggg cccgggggttc tgcggtctgtt agggacagag
180
gcaaagaagg gcaggacggt ccggtttccc gtggatgttc ccgcccgaga aagacagcaa
240
gttgtgtgtg cgcccgggac gcgggagggg aggtagccgc cgcccgccag ccatggacca
300
tcatcttttag tgcagaggat ggaaagtga tgcccagtaa gactgaagat ccattctgca
360
ttacgggaact gtggattatc tgtgggtccc tggatgttc acaccttcac tcaactcctgc
420
agtccctgaa cacttacttg gggctcctcat tgccctatct ggtgaaagat ggcattccagc
480
ctgacttgta ctggagtaat ctgggctttg ctgtcttttc tttgtgtgc cacctcctgc
540
gtgggggttct ttatgcctta ctggctctgg ggatcacagc tgggcaagcc tgtgtccttc
600
ggtaccttcc ggaggtgctc atatcctgtg catgatgaga gtcggcagat gatgggtgatg
660
gtggaggaat gtgggcgcta tgccctcttc cagggcatcc ccagcgcaga atggaggatc
720
tgcaccatag tgaccggcct gggttgtggc ctccctctcc tgggtggcgt cactgccctc
780
atgggttgct gtgtttccga cctcatctcc aggacagtgg gaagagtggc tggaggaatt
840
cagtttcttg ggggcttggt gattggtgct ggctgtgccc tctaccctt gggctgggac
900
agtgaggaag tccggcagac ttgtggctac acttctggcc agtttgacct ggggaagtgt
960
gaaatcggct gggcctacta ctgcacggga gcaggtgcca ctgccgccat gctgctgtgc
1020
acgtggctgg cttgcttttc gggcaagaaa cagaagcact acccatactg agatggagct
1080
accaagagca gacagaggag aagatggggc aaaggggctt ggagaggtca aaacatccac
1140
ctaccttcaa aaggtgggat agtagttcta atccaatata atgctaataa aatgaaaccc
1200
gataaaatca ggaacatgat ataggaagga aggattgtag gagatttgtg ggggaaaaaa
1260
aaggagagta tagaatgatg gagaaaaatg gaccaaaggc taaaaatatt gcagggcatc
1320
gggtgtttct attccacaga gtattgttaa tgtacaacac acacacacac acacacacac
1380
acacacacac acacacacaa caaatctaca tatacaaaca agggtttggg ttttagtttt
1440
ttttttttta ggtgaggact cagaaaatca aagggctagt agaaacagtg ttatgttggg
1500
aagcaaggta ccccaaaga tgttccctgt aggtcacggc actcccaaaa gcacacaagc
1560
acatacagac atatgcatcc ccacacacgc ctatgcacaa acgtggatta tcgcacagac
1620
tgggaggttt agtgggtgcat ttctcctctg tttctttttt aatatacatt taaaatacag
1680

tattatcact ttataaaaca tacattaagc ctaataaatg gaccaataag ccaaactatc
 1740
 agtatTTTTgt atatcctgca taaactctaa tttagttcct caacatatTTt tcagtgttta
 1800
 tgcagacctt tagagttaag cttttgtatt tccatgttat tccacaatat gcaatatttc
 1860
 tctgagtagc ttctgctatg atattcttat gaagaaaagg ggcaactttc tgtccactat
 1920
 aggagagaat tcagccgaag atatgagagt aatgagagac attttccagt cattggatcg
 1980
 tgttttcttt tgtccattat tgtactgtgc tgtaccacat ttatttctat attcattttg
 2040
 taaaaaatTTt aaaagtgcta ttttgtttgt atttgaaaat ctctgtgaat aaattctctc
 2100
 tttgatcaat aaaaaaaaaa aaaaaaaaaa
 2128

<210> 3638

<211> 200

<212> PRT

<213> Homo sapiens

<400> 3638

Met	Ala	Ser	Ser	Leu	Thr	Cys	Thr	Gly	Val	Ile	Trp	Ala	Leu	Leu	Ser
1				5					10					15	
Phe	Leu	Cys	Ala	Ala	Thr	Ser	Cys	Val	Gly	Phe	Phe	Met	Pro	Tyr	Trp
			20					25					30		
Leu	Trp	Gly	Ser	Gln	Leu	Gly	Lys	Pro	Val	Ser	Phe	Gly	Thr	Phe	Arg
		35					40					45			
Arg	Cys	Ser	Tyr	Pro	Val	His	Asp	Glu	Ser	Arg	Gln	Met	Met	Val	Met
	50					55					60				
Val	Glu	Glu	Cys	Gly	Arg	Tyr	Ala	Ser	Phe	Gln	Gly	Ile	Pro	Ser	Ala
65					70					75				80	
Glu	Trp	Arg	Ile	Cys	Thr	Ile	Val	Thr	Gly	Leu	Gly	Cys	Gly	Leu	Leu
			85						90					95	
Leu	Leu	Val	Ala	Leu	Thr	Ala	Leu	Met	Gly	Cys	Cys	Val	Ser	Asp	Leu
			100					105						110	
Ile	Ser	Arg	Thr	Val	Gly	Arg	Val	Ala	Gly	Gly	Ile	Gln	Phe	Leu	Gly
		115					120					125			
Gly	Leu	Leu	Ile	Gly	Ala	Gly	Cys	Ala	Leu	Tyr	Pro	Leu	Gly	Trp	Asp
	130					135					140				
Ser	Glu	Glu	Val	Arg	Gln	Thr	Cys	Gly	Tyr	Thr	Ser	Gly	Gln	Phe	Asp
145					150					155				160	
Leu	Gly	Lys	Cys	Glu	Ile	Gly	Trp	Ala	Tyr	Tyr	Cys	Thr	Gly	Ala	Gly
			165						170					175	
Ala	Thr	Ala	Ala	Met	Leu	Leu	Cys	Thr	Trp	Leu	Ala	Cys	Phe	Ser	Gly
			180					185					190		
Lys	Lys	Gln	Lys	His	Tyr	Pro	Tyr								
		195					200								

<210> 3639

<211> 726

<212> DNA

<213> Homo sapiens

<400> 3639

attcggcacg agattctgga caatttttct ttatacttta atgagtggtgc gtttctctta
 60
 aagaataagc tttaatatat atacacccat aataccttca aatacatttt taagcactta
 120
 aagactaaca gtggttatct ctcagcggga ttataaatgt tttggttttt tttttttttt
 180
 tgtacatttt agtatttttt gaaatttttt taataagcgt gtattacata cagtaaacaa
 240
 aagcacatta atgtaggcag attatcaatg ttatgcattt cactgattgc atatctcttt
 300
 ttttatcaat ggtgaacatt gcaaattgatt gatacgtttt tcttaggaag tggcattgcc
 360
 acaaattggtt tttccaacac cagcagggcc tgagagtgtc atcaccatac actcttgccg
 420
 gcaataaaaa aatttcacct tttaattgat ttaaaaggga aaagttgggg tgttgggttc
 480
 tccagggcat ttctttcatt atgagtgaca tttttctgaa aggaacgtga tctcgttttc
 540
 tagccgcatt aagcatttct ccaacaagac ccactgtacc agtcctggga tctccacacc
 600
 tgtgccttct ccctgctctt tctaggtcct gattctcacc tctgctgtg taataaccct
 660
 gtcattttct ccttatccca gtcccatgtc tgtgacaagc ttggaggccg agttgcaagc
 720
 taagat
 726

<210> 3640

<211> 102

<212> PRT

<213> Homo sapiens

<400> 3640

Met	Leu	His	Ala	Ala	Arg	Lys	Arg	Asp	His	Val	Pro	Phe	Arg	Lys	Met
1				5					10					15	
Ser	Leu	Ile	Met	Lys	Glu	Met	Pro	Trp	Arg	Thr	Gln	His	Pro	Asn	Phe
			20					25					30		
Ser	Leu	Leu	Asn	Pro	Leu	Lys	Gly	Glu	Ile	Phe	Leu	Leu	Pro	Ala	Arg
			35				40					45			
Val	Tyr	Gly	Asp	Asp	Thr	Leu	Arg	Pro	Cys	Trp	Cys	Trp	Lys	Asn	His
	50					55					60				
Leu	Trp	Gln	Cys	His	Phe	Leu	Arg	Lys	Thr	Tyr	Gln	Ser	Phe	Ala	Met
65					70					75				80	
Phe	Thr	Ile	Asp	Lys	Lys	Arg	Asp	Met	Gln	Ser	Val	Lys	Cys	Ile	Thr
			85					90						95	
Leu	Ile	Ile	Cys	Leu	His										
			100												

<210> 3641

<211> 455

<212> DNA

<213> Homo sapiens

```

<400> 3641
gtgcaccagc tatggcgag cgcctcgctc tgcaccttc ccgccgaccg ggccaactgc
60
cgcgggggcg ggcggggcgt gcggtccccg gagggcgagga aatgtcgag agccccgagg
120
agtccccgag cagtcacgcg agccgggacc ttgccccgct ggaacgcaga agcggccgtg
180
gagctcgaga cgctcgcgcg ctcaacctct gggccccctgt gcgtggggaa gtcaggaaga
240
agacgccgag tgaggtcacg gtgcccacga ggggtggattc ccctcggcct gaccacgcca
300
ggaggtggcc gaagggaaga ggggtggggca ggggctgctc tgcacctct agcagagcgg
360
caccctgca ggtgtttgct ctggcgagga gaagccccag agagcagttc gggactgtgc
420
ggattggctt tagggagcca gcttttaaaa cgcgt
455

```

```

<210> 3642
<211> 148
<212> PRT
<213> Homo sapiens

```

```

<400> 3642
Met Ala Gln Pro Leu Val Leu Ala Pro Ser Arg Arg Pro Gly Gln Leu
1      5      10      15
Pro Arg Gly Arg Ala Gly Gly Ala Ala Pro Gly Gly Glu Glu Met Ser
20     25     30
Gln Ser Pro Glu Glu Ser Arg Ser Ser His Ala Ser Arg Asp Leu Ala
35     40     45
Pro Leu Glu Arg Arg Ser Gly Arg Gly Ala Arg Asp Ala Arg Ala Leu
50     55     60
Thr Ser Trp Ala Pro Val Arg Gly Glu Val Arg Lys Lys Thr Pro Ser
65     70     75     80
Glu Val Thr Val Pro Thr Arg Val Asp Ser Pro Arg Pro Asp His Ala
85     90     95
Arg Arg Trp Pro Lys Gly Arg Gly Trp Gly Arg Gly Cys Ser Ala Pro
100    105    110
Ser Ser Arg Ala Ala Ser Leu Gln Val Phe Ala Leu Ala Arg Arg Ser
115    120    125
Pro Arg Glu Gln Phe Gly Thr Val Arg Ile Gly Phe Arg Glu Pro Ala
130    135    140
Phe Lys Thr Arg
145

```

```

<210> 3643
<211> 2243
<212> DNA
<213> Homo sapiens

```

```

<400> 3643
nngggtatag agtctccctg gcccataata ggtctccact attggctggt ggagcgcttc
60

```

ttcaagatct tcccactgct gggtttgcac gaggagggat taagaaagtt ctcgaggtac
120
ctttgcaagc aggtggccag taaagctgag gagaatctgc tcatgggtgct ggggacagac
180
atgagtgatc ggagagctgc agtcatcttt gcagatacac ttactcttct gtttgaaggg
240
attgcccgcga ttgtggagac ccaccagcca atagtggaga cctattatgg gccagggaga
300
ctctataccc tgatcaaata tctgcagggtg gaatgtgaca gacagggtgga gaagggtgga
360
gacaagttca tcaagcaaag ggactaccac cagcagttcc ggcatgttca gaacaacctg
420
atgagaaatt ctacaacaga aaaaatcgaa ccaagagaac tggaccccat cctgactgag
480
gtcaccctga tgaatgcccg cagtgcagta tacttacgct tcctcaagaa gaggattagc
540
tctgattttg aggtgggaga ctccatggcc tcagaggaag taaagcaaga gcaccagaag
600
tgtctggaca aactcctcaa taactgcctt ttgagctgta ccatgcagga gctaattggc
660
ttatatgtta ccatggagga gtacttcatg agggagactg tcaataaggc tgtggctctg
720
gacacctatg agaagggccca gctgacatcc agcatgggtg atgatgtctt ctacattgtt
780
aagaagtgca ttgggcgggc tctgtccagc tccagcattg actgtctctg tgccatgatc
840
aacctcgcca ccacagagct ggagtctgac ttcagggatg ttctgtgtaa taagctgcgg
900
atgggctttc ctgccaccac cttccaggac atccagcgcg gggtgacaag tgccgtgaac
960
atcatgcaca gcagcctcca gcaaggcaaa tttgacacaa aaggcatcga gagtactgac
1020
gaggcgaaga tgtccttcct ggtgactctg aacaacgtgg aagtctgcag tgaaaacatc
1080
tccactctga agaagacact ggagagtgcac tgcaccaagc tcttcagcca gggcattgga
1140
ggggagcagg cccaggccaa gtttgacagc tgcctttctg acttgggccgc cgtgtccaac
1200
aaattccgag acctcttgca ggaagggtg acggagctca acagcacagc catcaagcca
1260
caggtgcagc cttggatcaa cagctttttc tccgtctccc acaacatcga ggaggaagaa
1320
ttcaatgact atgaggccaa cgacccttgg gtacaacagt tcatecttaa cctggagcag
1380
caaatggcag agttcaaggc cagcctgtcc ccggtcatct acgacagcct aaccggcctc
1440
atgactagcc ttgttgccgt cgagttggag aaagtgggtg tgaaatccac ctttaaccgg
1500
ctgggtgggtc tgcagtttga caaggagctg aggtcactca ttgcctacct taccaggtg
1560
accacctgga ccatccgaga caagtttgcc cggctctccc agatggccac catcctcaat
1620
ctggagcggg tgaccgagat cctcgattac tggggaccca attccggccc attgacgtgg
1680

cgctcaccc ctgctgaagt gcgccaggtg ctggccctgc ggatagactt ccgcagtga
 1740
 gatatcaaga ggctgcgcct gtagctgcct ggatgagcac acctggctca tcacacttgc
 1800
 aggcctgttc cctaaggggc ccagccaag gagctgagcg aggctgtctg gcttggggga
 1860
 gatctgacag ccagacctt tctacggctg gcagcagaga aacaaagtct ggaccactc
 1920
 catgctctgc cctcagacct ggccaggtga tgctctgggg gcagcatctc cccaccgaga
 1980
 gaagcgggct cctaattgagg tgggaaagcc acggcaggca gcgagcagcc caggccagct
 2040
 ttctgcatgg atggtcagtc tcttgccctc aaacactaca gcaaacaagc taccctgccc
 2100
 agtcctagac aacttgggta catctgggga cctagcagtt aggcttgact ttgaggagag
 2160
 gctgtgatgt ttatgatccc tgaataaagc tactccttgg agaaaaaaaa aaaaaaaaaa
 2220
 aaaaaaaaaa aaaaaaaaaa aaa
 2243

<210> 3644

<211> 560

<212> PRT

<213> Homo sapiens

<400> 3644

Gly	Leu	His	Glu	Glu	Gly	Leu	Arg	Lys	Phe	Ser	Glu	Tyr	Leu	Cys	Lys
1				5					10					15	
Gln	Val	Ala	Ser	Lys	Ala	Glu	Glu	Asn	Leu	Leu	Met	Val	Leu	Gly	Thr
			20					25					30		
Asp	Met	Ser	Asp	Arg	Arg	Ala	Ala	Val	Ile	Phe	Ala	Asp	Thr	Leu	Thr
		35				40					45				
Leu	Leu	Phe	Glu	Gly	Ile	Ala	Arg	Ile	Val	Glu	Thr	His	Gln	Pro	Ile
	50				55					60					
Val	Glu	Thr	Tyr	Tyr	Gly	Pro	Gly	Arg	Leu	Tyr	Thr	Leu	Ile	Lys	Tyr
65					70				75					80	
Leu	Gln	Val	Glu	Cys	Asp	Arg	Gln	Val	Glu	Lys	Val	Val	Asp	Lys	Phe
			85					90					95		
Ile	Lys	Gln	Arg	Asp	Tyr	His	Gln	Gln	Phe	Arg	His	Val	Gln	Asn	Asn
		100					105						110		
Leu	Met	Arg	Asn	Ser	Thr	Thr	Glu	Lys	Ile	Glu	Pro	Arg	Glu	Leu	Asp
	115					120					125				
Pro	Ile	Leu	Thr	Glu	Val	Thr	Leu	Met	Asn	Ala	Arg	Ser	Glu	Leu	Tyr
	130					135				140					
Leu	Arg	Phe	Leu	Lys	Lys	Arg	Ile	Ser	Ser	Asp	Phe	Glu	Val	Gly	Asp
145				150					155					160	
Ser	Met	Ala	Ser	Glu	Glu	Val	Lys	Gln	Glu	His	Gln	Lys	Cys	Leu	Asp
			165				170						175		
Lys	Leu	Leu	Asn	Asn	Cys	Leu	Leu	Ser	Cys	Thr	Met	Gln	Glu	Leu	Ile
		180					185					190			
Gly	Leu	Tyr	Val	Thr	Met	Glu	Glu	Tyr	Phe	Met	Arg	Glu	Thr	Val	Asn
	195					200					205				
Lys	Ala	Val	Ala	Leu	Asp	Thr	Tyr	Glu	Lys	Gly	Gln	Leu	Thr	Ser	Ser

210	215	220
Met Val Asp Asp Val Phe Tyr Ile Val Lys Lys Cys Ile Gly Arg Ala		
225	230	235
Leu Ser Ser Ser Ser Ile Asp Cys Leu Cys Ala Met Ile Asn Leu Ala		240
	245	250
Thr Thr Glu Leu Glu Ser Asp Phe Arg Asp Val Leu Cys Asn Lys Leu		255
	260	265
Arg Met Gly Phe Pro Ala Thr Thr Phe Gln Asp Ile Gln Arg Gly Val		270
	275	280
Thr Ser Ala Val Asn Ile Met His Ser Ser Leu Gln Gln Gly Lys Phe		285
	290	295
Asp Thr Lys Gly Ile Glu Ser Thr Asp Glu Ala Lys Met Ser Phe Leu		300
305	310	315
Val Thr Leu Asn Asn Val Glu Val Cys Ser Glu Asn Ile Ser Thr Leu		320
	325	330
Lys Lys Thr Leu Glu Ser Asp Cys Thr Lys Leu Phe Ser Gln Gly Ile		335
	340	345
Gly Gly Glu Gln Ala Gln Ala Lys Phe Asp Ser Cys Leu Ser Asp Leu		350
	355	360
Ala Ala Val Ser Asn Lys Phe Arg Asp Leu Leu Gln Glu Gly Leu Thr		365
	370	375
Glu Leu Asn Ser Thr Ala Ile Lys Pro Gln Val Gln Pro Trp Ile Asn		380
385	390	395
Ser Phe Phe Ser Val Ser His Asn Ile Glu Glu Glu Glu Phe Asn Asp		400
	405	410
Tyr Glu Ala Asn Asp Pro Trp Val Gln Gln Phe Ile Leu Asn Leu Glu		415
	420	425
Gln Gln Met Ala Glu Phe Lys Ala Ser Leu Ser Pro Val Ile Tyr Asp		430
	435	440
Ser Leu Thr Gly Leu Met Thr Ser Leu Val Ala Val Glu Leu Glu Lys		445
	450	455
Val Val Leu Lys Ser Thr Phe Asn Arg Leu Gly Gly Leu Gln Phe Asp		460
465	470	475
Lys Glu Leu Arg Ser Leu Ile Ala Tyr Leu Thr Thr Val Thr Thr Trp		480
	485	490
Thr Ile Arg Asp Lys Phe Ala Arg Leu Ser Gln Met Ala Thr Ile Leu		495
	500	505
Asn Leu Glu Arg Val Thr Glu Ile Leu Asp Tyr Trp Gly Pro Asn Ser		510
	515	520
Gly Pro Leu Thr Trp Arg Leu Thr Pro Ala Glu Val Arg Gln Val Leu		525
	530	535
Ala Leu Arg Ile Asp Phe Arg Ser Glu Asp Ile Lys Arg Leu Arg Leu		540
545	550	555
		560

<210> 3645

<211> 823

<212> DNA

<213> Homo sapiens

<400> 3645

acgcgtacat gggcaggtgg tagcggttat agtcaggtg gtcaagagtg cttctctcca
60

ccagggtttt gtagatggat tcctcaaaaa ctcttttgag gtattgctg ggcttctcag
120

tcgggttgat ttcctcatct tctatttgat gggctaactg ctctatggaa ggaagatctt
 180
 cctcctcctt ggaggctaag atttggcgta actctttcct gagatcaata aaacgatcgt
 240
 ggaacagggc caggcaccac ggctcgggtga agtagctata gagatctgtg atcaggtttt
 300
 catcgtaccg agcacacagg ttgttgagga gttgctcgtg ctggccaaac aagcggatgt
 360
 agttggaggc ggggaagggc tccctagaaa ggcacgtgat ggtttccacc attttatact
 420
 tgtaatatg aattcggaag taagtcccat ttttcgcact gccggttact agttctaaac
 480
 cataattagg ctggggccatt tgtacctcca agggagttgg aatggcaggc ttggcaatat
 540
 gcagataatg gtaagaccca ggaagaatgc ccccttgaat cttggctccc ttgtacatgg
 600
 ggatgagccg gtcaagatta gctggtggct cggtcacagg ctcaagggtt ggatcaaaga
 660
 gatgtagcat agctgctgcc agctgaaagc caatttcttt ggaactgaag ttgctggtgg
 720
 gccattcat ttgagtagta tctattggag aatttgggtga gggagccagc agctctgatg
 780
 gctatgtcgt tggtgtggaa gttggtatca atcacaagtc gac
 823

<210> 3646

<211> 243

<212> PRT

<213> Homo sapiens

<400> 3646

Met	Asn	Gly	Pro	Thr	Ser	Asn	Phe	Ser	Ser	Lys	Glu	Ile	Gly	Phe	Gln
1				5				10						15	
Leu	Ala	Ala	Ala	Met	Leu	His	Leu	Phe	Asp	Pro	Thr	Leu	Glu	Pro	Val
		20						25					30		
Thr	Glu	Pro	Pro	Ala	Asn	Leu	Asp	Arg	Leu	Ile	Pro	Met	Tyr	Lys	Gly
		35					40					45			
Ala	Lys	Ile	Gln	Gly	Gly	Ile	Leu	Pro	Gly	Ser	Tyr	His	Tyr	Leu	His
	50					55					60				
Ile	Ala	Lys	Pro	Ala	Ile	Pro	Thr	Pro	Leu	Glu	Val	Gln	Met	Ala	Gln
65					70					75					80
Pro	Asn	Tyr	Gly	Leu	Glu	Leu	Val	Thr	Gly	Ser	Ala	Lys	Asn	Gly	Thr
				85					90					95	
Tyr	Phe	Arg	Ile	His	Ile	Asn	Lys	Tyr	Lys	Met	Val	Glu	Thr	Ile	Thr
			100					105					110		
Cys	Leu	Ser	Arg	Glu	Pro	Phe	Pro	Ala	Ser	Asn	Tyr	Ile	Arg	Leu	Phe
		115					120					125			
Gly	Gln	His	Glu	Gln	Leu	Leu	Asn	Asn	Leu	Cys	Ala	Arg	Tyr	Asp	Glu
		130				135					140				
Asn	Leu	Ile	Thr	Asp	Leu	Tyr	Ser	Tyr	Phe	Thr	Glu	Pro	Trp	Cys	Leu
145					150					155					160
Ala	Leu	Phe	His	Asp	Arg	Phe	Ile	Asp	Leu	Arg	Lys	Glu	Leu	Arg	Gln
				165					170					175	
Ile	Leu	Ala	Ser	Lys	Glu	Glu	Glu	Asp	Leu	Pro	Ser	Ile	Glu	Gln	Leu

				180					185					190				
Ala	His	Gln	Ile	Glu	Asp	Glu	Glu	Ile	Asn	Pro	Thr	Glu	Lys	Pro	Arg			
		195						200					205					
Gln	Tyr	Leu	Lys	Arg	Val	Phe	Glu	Glu	Ser	Ile	Tyr	Lys	Thr	Leu	Val			
	210					215					220							
Glu	Arg	Ser	Thr	Leu	Asp	Tyr	Leu	His	Tyr	Asn	Arg	Tyr	His	Leu	Pro			
225					230					235					240			
Met	Tyr	Ala																

<210> 3647

<211> 584

<212> DNA

<213> Homo sapiens

<400> 3647

```

acgcgtcggg cgagcgccgc gcctacgggc ccttttttct gcgcgaccgc gtggctgtgg
60
gcgcggatgc ctttgagcgc ggtgacttct cactgcgtat cgagccgctg gaggtcgcgc
120
acgagggcac ctactcctgc cacctgcacc accattactg tggcctgcac gaacgccgcg
180
tcttcacact gacggtcgcc gaacccacg cggagccgcc ccccgggggc tctccgggca
240
acggctccag ccacagcggc gcccagggc caggtgaagg aggcctccct gggacccggg
300
aaggcgggag cccacccac cgggggttgc tctgcgccg ctgtcccttg cccgaggccc
360
gcgcatccca gcgggnnggc cgtggcccgc gtcggggcgc aggtcttgct ggtacctgac
420
gccgtccga ccccggttc cccgcagacc ccacactggc gcgcggccac aacgtcatca
480
atgtcatcgt ccccgagagc cgagcccact tcttcagca gctgggctac gtgctggcca
540
cgctgctgct cttcatcctg ctactggtca ctgtcctcct ggcc
584

```

<210> 3648

<211> 63

<212> PRT

<213> Homo sapiens

<400> 3648

Thr	Arg	Arg	Ala	Ser	Ala	Ala	Pro	Thr	Gly	Pro	Phe	Phe	Cys	Ala	Thr
1				5					10				15		
Ala	Trp	Leu	Trp	Ala	Arg	Met	Pro	Leu	Ser	Ala	Val	Thr	Ser	His	Cys
		20						25				30			
Val	Ser	Ser	Arg	Trp	Arg	Ser	Pro	Thr	Arg	Ala	Pro	Thr	Pro	Ala	Thr
	35					40					45				
Cys	Thr	Thr	Ile	Thr	Val	Ala	Cys	Thr	Asn	Ala	Ala	Ser	Ser	Thr	
50						55					60				

<210> 3649

<211> 648

<212> DNA

<213> Homo sapiens

<400> 3649

```

naaaaataat gcagacataa aatgaaaaaa gattgaagat tgttacagag aaataggtga
60
ggaagcatga tactgaaggc ttgtcactcc tgttttcact tccacacaga caagcatatt
120
tgctcattgt ttgctgtgct cccctttttt tttcagggtg ctatttctgc agatgtcaaa
180
gaagttctgt taactgatgg gaatgaaaag gccatcagaa atgtgcaaga catcatcaca
240
aggaatcaga aggctggtgt gtttaagacc cagaaaatat caagctgcgt tttacgatgg
300
gataatgaga cagatgtctc tcaactggaa ggacattttg acattgttat gtgtgctgac
360
tgctgttttc tggaccagta cagagccagc cttgttgatg caataaagag attactccag
420
cccaggggga aagcgatggt atttgcccca cgccgagggg atactttaaa ccagttttgc
480
aatctagctg aaaaagctgg tttctgtatc caaagacatg aaaattatga tgaacacatt
540
tcaaacttcc actccaagtt gaaaaaggaa aaccgggaca tatatgaaga aaaccttcat
600
taccgcctc tgcttatttt gaccaaacat ggatagaaga ttaagctt
648

```

<210> 3650

<211> 189

<212> PRT

<213> Homo sapiens

<400> 3650

```

Met Ile Leu Lys Ala Cys His Ser Cys Phe His Phe His Thr Asp Lys
1          5          10          15
His Ile Cys Ser Leu Phe Ala Val Leu Pro Phe Phe Phe Gln Val Ala
20          25          30
Ile Ser Ala Asp Val Lys Glu Val Leu Leu Thr Asp Gly Asn Glu Lys
35          40          45
Ala Ile Arg Asn Val Gln Asp Ile Ile Thr Arg Asn Gln Lys Ala Gly
50          55          60
Val Phe Lys Thr Gln Lys Ile Ser Ser Cys Val Leu Arg Trp Asp Asn
65          70          75          80
Glu Thr Asp Val Ser Gln Leu Glu Gly His Phe Asp Ile Val Met Cys
85          90          95
Ala Asp Cys Leu Phe Leu Asp Gln Tyr Arg Ala Ser Leu Val Asp Ala
100         105         110
Ile Lys Arg Leu Leu Gln Pro Arg Gly Lys Ala Met Val Phe Ala Pro
115         120         125
Arg Arg Gly Asn Thr Leu Asn Gln Phe Cys Asn Leu Ala Glu Lys Ala
130         135         140
Gly Phe Cys Ile Gln Arg His Glu Asn Tyr Asp Glu His Ile Ser Asn
145         150         155         160
Phe His Ser Lys Leu Lys Lys Glu Asn Pro Asp Ile Tyr Glu Glu Asn

```


165 170 175
 Leu His Tyr Pro Pro Leu Leu Ile Leu Thr Lys His Gly
 180 185

<210> 3651

<211> 2469

<212> DNA

<213> Homo sapiens

<400> 3651

```

ggctgtaccg gaacgtgggg cgaggcgctg ttcacaaag aaaaagggtt cttttggtca
60
cccaccactg gcccacatggc tgccgtgcag atggatcctg agctagccaa gcgcctcttc
120
tttgaagggg ccactgtggt catcctgaac atgcccaagg gaacagagtt tgggattgac
180
tataactcct gggagggtcgg gcccaagttc cggggcggtga agatgatccc tccaggcatc
240
cacttctctc actacagctc tgtggacaag gctaataccga aggaagtagg ccctcgtagt
300
ggtttcttcc ttagcctgca ccagcggggg ctgacagtgc tgcgctggag cacactcagg
360
gaagaggttag acctgtcccc agccccagag tctgaggtgg aggccatgag ggccaacctc
420
caggagctgg accagttcct ggggccttac ccatatgcca ccctgaagaa gtggatctca
480
ctcaccaact tcatcagcga agccacagtg gagaagctac agcccgagaa tcgacagatc
540
tgtgcctttt ccgatgtgct acctgtgctc tccatgaagc acaccaagga ccgctggggg
600
cagaatctac cccgctgtgg cattgagtgc aaaagctacc aagagggcct ggcccgggta
660
ccagagatga agcccagagc cgggacagag atccgcttct cagagctgcc cacgcagatg
720
ttcccagagg gtgccacgcc agctgagata accaagcaca gcatggacct gagctatgcc
780
ctggagactg tgctcatcaa gcagttcccc agcagcccccc aggatgtgct tgggtgaactc
840
cagtttgctt ttgtgtgctt cctgctgggg aatgtgtacg aggcatttga gcattggaag
900
cggtccttgc acctcctgtg ccggtcagaa gcagccatga tgaagcacca caccctctac
960
atcaacctca tgtccatcct gtaccaccag cttggtgaga tccccgctga cttcttcgta
1020
gacattgtct cccaagacaa ctctctcacc agcaccttac aggttttctt ttctcttgcc
1080
tgcagcattg ccgtggatgc caccctgaga aagaaagctg aaaagttcca agctcacctg
1140
accaagaagt tccggtggga ctttgctgcg gaacctgagg actgtgcccc ggtgggtggtg
1200
gagctccctg agggcatcga gatgggctaa ctcggggagc gctctcagct gcgagggggcc
1260
ccttcccaca gggctgcagt cctggcctct ccatttactt cttcccatcc tgggacctgc
1320

```

cagggcagca atctctccag gtcctgcaaa gatggagcca gaattccctt tttcactgat
 1380
 aaatatattt cttcattgcc aaagaggctg taccatcctt gaaggcacat ttgtgggttc
 1440
 cccatcagcc aggccttggg gctaacctgg ctgaatttca cacaggctct tacacacaca
 1500
 cgctcctagg agacatctgc ctacacggca accatatttc ctctgaatga gaaggaattg
 1560
 aaccaaagt ccaagaaaga actgattggt tgttccatag gagcttagga aacaagaaac
 1620
 cctggattgc ccaggggggc tgagaagttg gttgggtgact ttttttgccg ttaaatgaag
 1680
 ggtgatggg agatcagccc gaattgccgc ctgcctcttg ctaaatagga gcagaggact
 1740
 tggcctgcag ctcttggga gcccttgatt gggaagagag tttcaaggga ggcagctgga
 1800
 ttcaatctag caggtggtca gcttcagctt tctccatcga aatcccatc tctgtccag
 1860
 aggcccagtg ggtcatctcc caaggtgggt gtggaccctg gcctcagagg ccttgctggt
 1920
 gctgtcacct cccacctgtt ccattccgag gcctcaccca gaagtgggac cctcccttc
 1980
 ctcaccagag ccaccgtgac tgtttctgat gacctggaga gtcaacaaca accagaaagg
 2040
 tttctgcccc gagcaggctt ctaaggcct ttacgaagtt ttgtgccttc caagtgctga
 2100
 agaagacctg gtcagcctaa atcttcccag tcccgctgtg gagctgtcag tcaccggagt
 2160
 aatgagctcc tggttcctcg ggagtccttc gtgctgtgtg gcaggggtcc tctctagaca
 2220
 agtacacagg ccctgccacc ctgacatcaa actggtgtac tatgatcaca gtccctgtgc
 2280
 catccttttc caagactggg gctcacacca tgtttttgaa tgagaatccc tgctgggtga
 2340
 gacttttgct tccacttggt tccttgagga tgtttttcca agagcataat gtacattaaa
 2400
 gtcttcgagt tgagacaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 2460
 aaaaaaaaaa
 2469

<210> 3652

<211> 384

<212> PRT

<213> Homo sapiens

<400> 3652

Met	Ala	Ala	Val	Gln	Met	Asp	Pro	Glu	Leu	Ala	Lys	Arg	Leu	Phe	Phe
1				5				10					15		
Glu	Gly	Ala	Thr	Val	Val	Ile	Leu	Asn	Met	Pro	Lys	Gly	Thr	Glu	Phe
			20					25					30		
Gly	Ile	Asp	Tyr	Asn	Ser	Trp	Glu	Val	Gly	Pro	Lys	Phe	Arg	Gly	Val
		35					40					45			
Lys	Met	Ile	Pro	Pro	Gly	Ile	His	Phe	Leu	His	Tyr	Ser	Ser	Val	Asp

50		55		60
Lys Ala Asn Pro Lys	Glu Val Gly Pro Arg Met Gly Phe Phe Leu Ser			
65	70	75	80	
Leu His Gln Arg Gly	Leu Thr Val Leu Arg Trp Ser Thr Leu Arg Glu			
	85	90	95	
Glu Val Asp Leu Ser	Pro Ala Pro Glu Ser Glu Val Glu Ala Met Arg			
	100	105	110	
Ala Asn Leu Gln Glu	Leu Asp Gln Phe Leu Gly Pro Tyr Pro Tyr Ala			
	115	120	125	
Thr Leu Lys Lys Trp	Ile Ser Leu Thr Asn Phe Ile Ser Glu Ala Thr			
	130	135	140	
Val Glu Lys Leu Gln	Pro Glu Asn Arg Gln Ile Cys Ala Phe Ser Asp			
145	150	155	160	
Val Leu Pro Val Leu	Ser Met Lys His Thr Lys Asp Arg Val Gly Gln			
	165	170	175	
Asn Leu Pro Arg Cys	Gly Ile Glu Cys Lys Ser Tyr Gln Glu Gly Leu			
	180	185	190	
Ala Arg Leu Pro Glu	Met Lys Pro Arg Ala Gly Thr Glu Ile Arg Phe			
	195	200	205	
Ser Glu Leu Pro Thr	Gln Met Phe Pro Glu Gly Ala Thr Pro Ala Glu			
	210	215	220	
Ile Thr Lys His Ser	Met Asp Leu Ser Tyr Ala Leu Glu Thr Val Leu			
225	230	235	240	
Ile Lys Gln Phe Pro	Ser Ser Pro Gln Asp Val Leu Gly Glu Leu Gln			
	245	250	255	
Phe Ala Phe Val Cys	Phe Leu Leu Gly Asn Val Tyr Glu Ala Phe Glu			
	260	265	270	
His Trp Lys Arg Leu	Leu His Leu Leu Cys Arg Ser Glu Ala Ala Met			
	275	280	285	
Met Lys His His Thr	Leu Tyr Ile Asn Leu Met Ser Ile Leu Tyr His			
	290	295	300	
Gln Leu Gly Glu Ile	Pro Ala Asp Phe Phe Val Asp Ile Val Ser Gln			
305	310	315	320	
Asp Asn Phe Leu Thr	Ser Thr Leu Gln Val Phe Phe Ser Ser Ala Cys			
	325	330	335	
Ser Ile Ala Val Asp	Ala Thr Leu Arg Lys Lys Ala Glu Lys Phe Gln			
	340	345	350	
Ala His Leu Thr Lys	Lys Phe Arg Trp Asp Phe Ala Ala Glu Pro Glu			
	355	360	365	
Asp Cys Ala Pro Val	Val Val Glu Leu Pro Glu Gly Ile Glu Met Gly			
370	375	380		

<210> 3653

<211> 283

<212> DNA

<213> Homo sapiens

<400> 3653

ncaaagagca aggggtggatg ccccaggcca gcccaggagc ttggcgccac tggaggaagt
60

gcattataacc aatcagagct tctttttgctg ctgctgaaat ggaacggtgc catcaggccg
120

tcttctccac tggagatgct ccttcagctc agcaggacgc tagctcggaa ctcagactgc
180

acattttttgc ggattgggag gagggccgac gccgtggccg gatagtctct ggagctgcct
 240
 tttgggggtg tttgctgtt ggcattttca gtactccacg cgt
 283

<210> 3654
 <211> 88
 <212> PRT
 <213> Homo sapiens

<400> 3654
 Met Pro Gln Ala Ser Pro Gly Ala Trp Arg His Trp Arg Lys Cys Ile
 1 5 10 15
 Ile Pro Ile Arg Ala Ser Phe Ala Ala Glu Met Glu Arg Cys His
 20 25 30
 Gln Ala Val Phe Ser Thr Gly Asp Ala Pro Ser Ala Gln Gln Asp Ala
 35 40 45
 Ser Ser Glu Leu Arg Leu His Ile Phe Ala Asp Trp Glu Glu Gly Arg
 50 55 60
 Arg Arg Gly Arg Ile Val Ser Gly Ala Ala Phe Trp Gly Cys Leu Pro
 65 70 75 80
 Val Gly Ile Phe Ser Thr Pro Arg
 85

<210> 3655
 <211> 3477
 <212> DNA
 <213> Homo sapiens

<400> 3655
 nttttttttt tttttttttt tttttttttt tttttttttt ttttgcactg attcagactt
 60
 taatggaggt gctcatttca atgccacaga ggtggtggca actgtggaac gtggcatggg
 120
 gagtgagagg ttgctctggt gcagctggag gaagaacagg gaacctaggg ttggggagag
 180
 atgtatagag gaaaactccc ccaggcacac agcctccgct ctggaccaac gcaggcttca
 240
 gtgagtacac acaaaggaac tgatgtcaag gccctttcta tgacccttcc cattctagca
 300
 agacctccca cccagtcac cttgggatct acagccacat gaaatacaga cacatcgttc
 360
 cccaagtca ggccagtttt aggccattga gttatgggga aatgattaat gggatgaatg
 420
 aaaaacaaat aaaataaata aataaataaa tacactaaag cttattagc caggcgtgat
 480
 cacatgccca aactcccct ccatcccagc actatgcaca gttcacggct catatgcaaa
 540
 gtggaagaca cgtgggacaa gagcaaagca caagtgcac atgggtccctc tetaacacct
 600
 cagcacacca accctgacgc tcccatcaca gatgctgac attcttccac ggacccccctt
 660
 ttataataat cctcattcac atttctagtt tctgagggaa gagagaaaga gaaaggaaga
 720

agtggaaagt gcggaacccc aatgagtagg gcacagaaag gagggcgagc agagacagca
780
agaggtcagg taagccaagg agcagcggag caggtcaatc aggggaagttc tgggcaccct
840
ggggctcagg ggatctcagg ggggtgaacta tcacagatca ggacagcaag gttccaggag
900
gatgagacag aggttccacg tctccaggca agcagaggaa tcacagcaca ctgggattac
960
ggaacttgcg tccagcaaac ttagccttgc tgcccaagag cctcttcaat tctgaggagt
1020
tggttggtatt tggccagacg ctccgagcgg cagggggcac cagtcttgat ctgtcctgtg
1080
cagagcccca ccacaaggtc agcaatgaat gtgtcctcag tctccccaga gcggtggctc
1140
accatcaccc cccagccatt ctctggggcc agcttgacg cctgaagaga ctcggtcacg
1200
gagccgatct ggttgacttt gagcaggagg cagttgcagg ccttctcggt caccggcccg
1260
tcaatacgtt ttgggttggt cactgtgaga tcatcccca caatctggat tctacattg
1320
gctgtgaact tctgccagc tccccaatca tcctgggtcaa atgggtcctc aatggagacc
1380
actgggtagt ccctgacaaa gtctggtag agtgcccca gctgggtccc agtgatgtac
1440
ctgctgggggt cagtgggaga cttgaagtcc aagtcattt tgccatcacg ataaaactcg
1500
gaggcagcaa catccatgcc gatgacaacc tggtcagtgt agccggcctt tgcgattgca
1560
gtcttcacca gctccagtgc ttctttgttc tccaggatgt taggtgcgaa tccaccttca
1620
tcacccacat tgggtggcatc ctccccgtac ttctccttga tgacccctt gagtgtatgg
1680
tagacctctg cacctagtct catggcttcc ttgaaggagc tggctccca aggagaatc
1740
atgaactcct gcatggccag cttgtttcca gcatgggagc ccccgttgat cacattgaag
1800
gctggcactg ggagtatgag gtcagggttc ccagccaagt cagcgatgtg gcggtacagg
1860
gggacccct tctcaaaggc tggtgagcac atcaataaaa ctattgcgcc tgccctgggt
1920
agcaagaaac tgaacgtcac agaacaagag aagattgaca aactgatgat cgagatggat
1980
ggaacagaaa ataaatctaa gtttggtgag aacgccattc tgggggtgtc ccttgccgtc
2040
tgcaaagctg gtgccgttga gaaggggggtc ccctgtacc gccacatcgc tgacttggt
2100
ggcaactctg aagtcattct gccagtcccc gcgttcaatg tcatcaatgg cggttctcat
2160
gctggcaaca agctggccat gcaggagttc atgatcctcc cagtcggtgc agcaaacttc
2220
aggggaagcca tgcgcattgg agcagagggt taccacaacc tgaagaatgt catcaaggag
2280
aaatatggga aagatgccac caatgtgggg gatgaaggcg gggttgctcc caacatcctg
2340

gagaataaag aaggcctgga gctgctgaag actgctattg ggaaagctgg ctacactgat
 2400
 aagggtggtca tcggcatgga cgtagcggcc tccgagttct tcaggtctgg gaagtatgac
 2460
 ctggacttca agtctcccgga tgaccccagc aggtacatct cgctgacca gctggctgac
 2520
 ctgtacaagt ccttcatcaa ggactacca gtggtgtcta tcgaagatcc ctttgaccag
 2580
 gatgactggg gagcttggca gaagttcaca gccagtgcag gaatccaggt agtgggggat
 2640
 gatctcacag tgaccaaccc caagaggatc gcccaggccg tgaacgagaa gtcttgcaac
 2700
 tgctctctgc tcaaagtcaa ccagattggc tccgtgaccg agtctcttca ggcgtgcaag
 2760
 ctggcccagg ccaatggttg gggcgctcatg gtgtctcatc gttcggggga gactgaagat
 2820
 accttcatcg ctgacctggt tgtggggctg tgcaactggc agatcaagac tggtgccct
 2880
 tgccgatctg agcgcttggc caagtacaac cagctcctca gaattgaaga ggagctgggc
 2940
 agcaaggcta agtttgccgg caggaacttc agaaaccctc tggccaagta agctgtgggc
 3000
 aggcaagccc ttcggtcacc tggtggctac acagaccctc cccctcgtgt cagctcaggc
 3060
 agctcgaggc ccccgaccaa cacttgcaag ggtccctgct agttagcgcc ccaccgct
 3120
 ggagttcgta ccgcttctt agaacttcta cagaagccaa gctccctgga gccctgttgg
 3180
 cagctctagc tttgcagtcg tgtaattggc ccaagtcatt gtttttctcg cctcactttc
 3240
 caccaagtgt ctagagtcac gtgagcctcg tgatcatctc ggggtggcca caggctagat
 3300
 ccccggtggg tttgtgctca aaataaaaag cctcagtgac ccatgaaaaa aaaaaaaaaa
 3360
 actcgtgccg actcgtgccg aattcggaga ncccatgtcc ggagaccca cggctggcac
 3420
 ttcgggcccc gtatgacctg ggacctcgcc gtcccagagac ctctggggtc cctccgt
 3477

<210> 3656

<211> 429

<212> PRT

<213> Homo sapiens

<400> 3656

Met	Ala	Ser	Leu	Lys	Glu	Leu	Ala	Pro	Thr	Gly	Arg	Ile	Met	Asn	Ser
1				5				10					15		
Cys	Met	Ala	Ser	Leu	Phe	Pro	Ala	Trp	Glu	Pro	Pro	Leu	Ile	Thr	Leu
		20						25				30			
Lys	Ala	Gly	Thr	Gly	Ser	Met	Arg	Ser	Gly	Phe	Pro	Ala	Lys	Ser	Ala
		35					40				45				
Met	Trp	Arg	Tyr	Arg	Gly	Thr	Pro	Phe	Ser	Lys	Ala	Val	Glu	His	Ile
	50				55						60				
Asn	Lys	Thr	Ile	Ala	Pro	Ala	Leu	Val	Ser	Lys	Lys	Leu	Asn	Val	Thr

65					70					75				80	
Glu	Gln	Glu	Lys	Ile	Asp	Lys	Leu	Met	Ile	Glu	Met	Asp	Gly	Thr	Glu
				85					90					95	
Asn	Lys	Ser	Lys	Phe	Gly	Ala	Asn	Ala	Ile	Leu	Gly	Val	Ser	Leu	Ala
			100					105					110		
Val	Cys	Lys	Ala	Gly	Ala	Val	Glu	Lys	Gly	Val	Pro	Leu	Tyr	Arg	His
		115					120					125			
Ile	Ala	Asp	Leu	Ala	Gly	Asn	Ser	Glu	Val	Ile	Leu	Pro	Val	Pro	Ala
	130					135					140				
Phe	Asn	Val	Ile	Asn	Gly	Gly	Ser	His	Ala	Gly	Asn	Lys	Leu	Ala	Met
145					150					155					160
Gln	Glu	Phe	Met	Ile	Leu	Pro	Val	Gly	Ala	Ala	Asn	Phe	Arg	Glu	Ala
			165						170					175	
Met	Arg	Ile	Gly	Ala	Glu	Val	Tyr	His	Asn	Leu	Lys	Asn	Val	Ile	Lys
			180					185					190		
Glu	Lys	Tyr	Gly	Lys	Asp	Ala	Thr	Asn	Val	Gly	Asp	Glu	Gly	Gly	Phe
		195					200					205			
Ala	Pro	Asn	Ile	Leu	Glu	Asn	Lys	Glu	Gly	Leu	Glu	Leu	Leu	Lys	Thr
	210					215					220				
Ala	Ile	Gly	Lys	Ala	Gly	Tyr	Thr	Asp	Lys	Val	Val	Ile	Gly	Met	Asp
225					230					235					240
Val	Ala	Ala	Ser	Glu	Phe	Phe	Arg	Ser	Gly	Lys	Tyr	Asp	Leu	Asp	Phe
			245						250				255		
Lys	Ser	Pro	Asp	Asp	Pro	Ser	Arg	Tyr	Ile	Ser	Pro	Asp	Gln	Leu	Ala
		260					265						270		
Asp	Leu	Tyr	Lys	Ser	Phe	Ile	Lys	Asp	Tyr	Pro	Val	Val	Ser	Ile	Glu
	275						280					285			
Asp	Pro	Phe	Asp	Gln	Asp	Asp	Trp	Gly	Ala	Trp	Gln	Lys	Phe	Thr	Ala
	290				295						300				
Ser	Ala	Gly	Ile	Gln	Val	Val	Gly	Asp	Asp	Leu	Thr	Val	Thr	Asn	Pro
305				310						315					320
Lys	Arg	Ile	Ala	Gln	Ala	Val	Asn	Glu	Lys	Ser	Cys	Asn	Cys	Leu	Leu
			325						330					335	
Leu	Lys	Val	Asn	Gln	Ile	Gly	Ser	Val	Thr	Glu	Ser	Leu	Gln	Ala	Cys
		340					345						350		
Lys	Leu	Ala	Gln	Ala	Asn	Gly	Trp	Gly	Val	Met	Val	Ser	His	Arg	Ser
	355					360						365			
Gly	Glu	Thr	Glu	Asp	Thr	Phe	Ile	Ala	Asp	Leu	Val	Val	Gly	Leu	Cys
	370				375						380				
Thr	Gly	Gln	Ile	Lys	Thr	Gly	Ala	Pro	Cys	Arg	Ser	Glu	Arg	Leu	Ala
385					390					395					400
Lys	Tyr	Asn	Gln	Leu	Leu	Arg	Ile	Glu	Glu	Glu	Leu	Gly	Ser	Lys	Ala
			405						410					415	
Lys	Phe	Ala	Gly	Arg	Asn	Phe	Arg	Asn	Pro	Leu	Ala	Lys			
			420					425							

<210> 3657

<211> 337

<212> DNA

<213> Homo sapiens

<400> 3657

tggttacgtgt tcatttttgcga ctcaaggcgt acacgtgcag atgtgtcaca tggttcatttt
60

cagctcaagg cgtacacgtg caggtgtgtt acgtgttcat tttcgactca aggcgtacac
 120
 gtgcagatgt gtcacatggt catttttcggc tcaaggcgta cacgtgcagg tgtgttacgt
 180
 gttcattttc ggctcaaggc ttacacgtgc aggtgtgcca catgttcatt ttcgggtcaa
 240
 ggcgtacatg tgcaggtgtg ttacatgttc attgtcagct caacgcgtac acgtgcaggt
 300
 gtgccacatg ttcatttttcg gttcaaggcg tacgcgt
 337

<210> 3658

<211> 99

<212> PRT

<213> Homo sapiens

<400> 3658

Met	Cys	His	Met	Phe	Ile	Phe	Ser	Ser	Arg	Arg	Thr	Arg	Ala	Gly	Val
1				5					10					15	
Leu	Arg	Val	His	Phe	Arg	Leu	Lys	Ala	Tyr	Thr	Cys	Arg	Cys	Val	Thr
			20					25					30		
Cys	Ser	Phe	Ser	Ala	Gln	Gly	Val	His	Val	Gln	Val	Cys	Tyr	Val	Phe
		35				40					45				
Ile	Phe	Gly	Ser	Arg	Leu	Thr	Arg	Ala	Gly	Val	Pro	His	Val	His	Phe
	50				55					60					
Arg	Leu	Lys	Ala	Tyr	Met	Cys	Arg	Cys	Val	Thr	Cys	Ser	Leu	Ser	Ala
65					70					75				80	
Gln	Arg	Val	His	Val	Gln	Val	Cys	His	Met	Phe	Ile	Phe	Gly	Ser	Arg
			85					90						95	

Arg Thr Arg

<210> 3659

<211> 1025

<212> DNA

<213> Homo sapiens

<400> 3659

naagcttttta ctgctgatgg tgatcaagtt tttgcaggac gttattattc atctgaaaat
 60
 acaagaccta agttcctaag cagagatgtg gattctgaaa taagtgactt ggagaatgag
 120
 gttgaaaata agacggccca gatattaaat cttcagcaac atttatctgc ccttgaaaaa
 180
 gatattaaac acaatgagga acttcttaaa aggtgccaac tacattataa agaactaaag
 240
 atgaaaataa gaaaaaatat ttctgaaatt cgggaacttg agaacataga agaacaccag
 300
 tctgtagata ttgcaacttt ggaagatgaa gctcaggaaa ataaaagcaa aatgaaaatg
 360
 gttgaggaac atatggagca acaaaaagaa aatatggagc atcttaaaag tctgaaaata
 420
 gaagcagaaa ataagtatga tgcaattaaa ttcaaaatta atcaactatc ggagctagca
 480

gaccactta aggatgaatt aaaccttgct gattctgaag tggataacca aaaacgaggg
 540
 aaacgacatt atgaaaaaaaa acaaaaagaa cacttgata ccttaaataa aaagaaacga
 600
 gaactggata tgaaagagaa agaactagag gagaaaatgt cacaagcaag acaaatctgc
 660
 ccagagcgta tagaagtaga aaaatctgca tcaattctgg acaagaaat taatcgatta
 720
 aggcagaaga tacaggcaga acatgctagt catggagatc gagaggaaat aatgaggcag
 780
 taccaagaag caagagagac ctatcttgat ctggatagta aagtgaggac tttaaaaaag
 840
 tttattaaat tactgggaga aatcatggag cacagattca agacatatca acaatttaga
 900
 aggtgtttga ctttacgatg caaattatac ttgacaact tactatctca gcgggcctat
 960
 tgtggaaaaa tgaattttga ccacaagaat gaaactctaa gtatatcagt tcagcctgga
 1020
 gaaaa
 1025

<210> 3660

<211> 341

<212> PRT

<213> Homo sapiens

<400> 3660

Xaa	Ala	Phe	Thr	Ala	Asp	Gly	Asp	Gln	Val	Phe	Ala	Gly	Arg	Tyr	Tyr
1				5					10					15	
Ser	Ser	Glu	Asn	Thr	Arg	Pro	Lys	Phe	Leu	Ser	Arg	Asp	Val	Asp	Ser
			20					25					30		
Glu	Ile	Ser	Asp	Leu	Glu	Asn	Glu	Val	Glu	Asn	Lys	Thr	Ala	Gln	Ile
	35						40					45			
Leu	Asn	Leu	Gln	Gln	His	Leu	Ser	Ala	Leu	Glu	Lys	Asp	Ile	Lys	His
	50					55					60				
Asn	Glu	Glu	Leu	Leu	Lys	Arg	Cys	Gln	Leu	His	Tyr	Lys	Glu	Leu	Lys
65					70				75					80	
Met	Lys	Ile	Arg	Lys	Asn	Ile	Ser	Glu	Ile	Arg	Glu	Leu	Glu	Asn	Ile
				85					90					95	
Glu	Glu	His	Gln	Ser	Val	Asp	Ile	Ala	Thr	Leu	Glu	Asp	Glu	Ala	Gln
			100					105					110		
Glu	Asn	Lys	Ser	Lys	Met	Lys	Met	Val	Glu	Glu	His	Met	Glu	Gln	Gln
	115						120					125			
Lys	Glu	Asn	Met	Glu	His	Leu	Lys	Ser	Leu	Lys	Ile	Glu	Ala	Glu	Asn
	130					135					140				
Lys	Tyr	Asp	Ala	Ile	Lys	Phe	Lys	Ile	Asn	Gln	Leu	Ser	Glu	Leu	Ala
145					150					155					160
Asp	Pro	Leu	Lys	Asp	Glu	Leu	Asn	Leu	Ala	Asp	Ser	Glu	Val	Asp	Asn
				165					170					175	
Gln	Lys	Arg	Gly	Lys	Arg	His	Tyr	Glu	Lys	Lys	Gln	Lys	Glu	His	Leu
			180					185					190		
Asp	Thr	Leu	Asn	Lys	Lys	Lys	Arg	Glu	Leu	Asp	Met	Lys	Glu	Lys	Glu
		195					200					205			
Leu	Glu	Glu	Lys	Met	Ser	Gln	Ala	Arg	Gln	Ile	Cys	Pro	Glu	Arg	Ile

```

      210              215              220
Glu Val Glu Lys Ser Ala Ser Ile Leu Asp Lys Glu Ile Asn Arg Leu
225              230              235              240
Arg Gln Lys Ile Gln Ala Glu His Ala Ser His Gly Asp Arg Glu Glu
      245              250              255
Ile Met Arg Gln Tyr Gln Glu Ala Arg Glu Thr Tyr Leu Asp Leu Asp
      260              265              270
Ser Lys Val Arg Thr Leu Lys Lys Phe Ile Lys Leu Leu Gly Glu Ile
      275              280              285
Met Glu His Arg Phe Lys Thr Tyr Gln Gln Phe Arg Arg Cys Leu Thr
      290              295              300
Leu Arg Cys Lys Leu Tyr Phe Asp Asn Leu Leu Ser Gln Arg Ala Tyr
305              310              315              320
Cys Gly Lys Met Asn Phe Asp His Lys Asn Glu Thr Leu Ser Ile Ser
      325              330              335
Val Gln Pro Gly Glu
      340

```

<210> 3661

<211> 1117

<212> DNA

<213> Homo sapiens

<400> 3661

```

gtgcactcgg attggcaaag cccgagtggg ctgtctccac tgggttctgg gtcattcccc
60
tgtggcaaaa gctcctcctg catctgatac ttgggtcttc tccctctttt ataaaacaat
120
ttagatccta gaatgtgcct tttcacaatg gcttcgtttc caattttcac tgttatttgg
180
caaaggggtg caacattact atttgtggag gttcccggca gagcaggttt tgcaatgtag
240
gtttcaattt tgctgggttc ttcagcaata tttgtggttt tgctcagtga tcctccagga
300
tcagcaacat agtttgactc ctccggtatt tctcccctgg tatgtgatgt agttttcttt
360
ttctccttaa tgcttttggg tctgcttgca aacctaccca ctttatctgg ctcggtctta
420
ctgtcatctt tcagggactg actgacagct gggctctgaaa aggctctgtg gttgctgctg
480
gtcatggcag caatggcatt gctgtgcatg atcaccgatg aaaactggct gctgtgtaca
540
atgaccgagg gtgcagagcc actgtagctg atcacagagg cggcattctc actgctatta
600
ctcaaagata aaacaggtac atcccctgcc cggagggtcag aactgacagc attttcagt
660
gaagaaactg acacctcagt tgaataaaaag ttattgtcaa gatccatttt caatgcctcc
720
tctccccatt tggtagcctc tgcattttgt acattggcag aagtgggtat gtcctgacat
780
gcagatgttt ccaatgggat ggctggactg ttgggtcaggg tgtttacagt atcttgga
840
ttcagcgttg gtaattcaga gctgtgtgga ttctgaacaa cataggtacc aggtgcagac
900

```

tcattcattt gactgttttc tcgtgcattt tcataggaag aatttcggta gctcttataa
 960
 ggggctctct tgcatttcat aggcagtagc ctataaagtt tatacggata gacactaggc
 1020
 ttcaagcctc catttgctgt ttttttactg atggaaagtc tatgatcgat ggcattggaaa
 1080
 gactttctgat gatttttgag tatatagtag gtcatga
 1117

<210> 3662

<211> 371

<212> PRT

<213> Homo sapiens

<400> 3662

Met	Thr	Tyr	Tyr	Ile	Leu	Lys	Asn	His	Gln	Lys	Ser	Phe	His	Ala	Ile	1	5	10	15
Asp	His	Arg	Leu	Ser	Ile	Ser	Lys	Lys	Thr	Ala	Asn	Gly	Gly	Leu	Lys	20	25	30	
Pro	Ser	Val	Tyr	Pro	Tyr	Lys	Leu	Tyr	Arg	Leu	Leu	Pro	Met	Lys	Cys	35	40	45	
Lys	Arg	Ala	Pro	Tyr	Lys	Ser	Tyr	Arg	Asn	Ser	Ser	Tyr	Glu	Asn	Ala	50	55	60	
Arg	Glu	Asn	Ser	Gln	Met	Asn	Glu	Ser	Ala	Pro	Gly	Thr	Tyr	Val	Val	65	70	75	80
Gln	Asn	Pro	His	Ser	Ser	Glu	Leu	Pro	Thr	Leu	Asn	Phe	Gln	Asp	Thr	85	90	95	
Val	Asn	Thr	Leu	Thr	Asn	Ser	Pro	Ala	Ile	Pro	Leu	Glu	Thr	Ser	Ala	100	105	110	
Cys	Gln	Asp	Ile	Pro	Thr	Ser	Ala	Asn	Val	Gln	Asn	Ala	Glu	Gly	Thr	115	120	125	
Lys	Trp	Gly	Glu	Glu	Ala	Leu	Lys	Met	Asp	Leu	Asp	Asn	Asn	Phe	Tyr	130	135	140	
Ser	Thr	Glu	Val	Ser	Val	Ser	Ser	Thr	Glu	Asn	Ala	Val	Ser	Ser	Asp	145	150	155	160
Leu	Arg	Ala	Gly	Asp	Val	Pro	Val	Leu	Ser	Leu	Ser	Asn	Ser	Ser	Glu	165	170	175	
Asn	Ala	Ala	Ser	Val	Ile	Ser	Tyr	Ser	Gly	Ser	Ala	Pro	Ser	Val	Ile	180	185	190	
Val	His	Ser	Ser	Gln	Phe	Ser	Ser	Val	Ile	Met	His	Ser	Asn	Ala	Ile	195	200	205	
Ala	Ala	Met	Thr	Ser	Ser	Asn	His	Arg	Ala	Phe	Ser	Asp	Pro	Ala	Val	210	215	220	
Ser	Gln	Ser	Leu	Lys	Asp	Asp	Ser	Lys	Pro	Glu	Pro	Asp	Lys	Val	Gly	225	230	235	240
Arg	Phe	Ala	Ser	Arg	Pro	Lys	Ser	Ile	Lys	Glu	Lys	Lys	Lys	Thr	Thr	245	250	255	
Ser	His	Thr	Arg	Gly	Glu	Ile	Pro	Glu	Glu	Ser	Asn	Tyr	Val	Ala	Asp	260	265	270	
Pro	Gly	Gly	Ser	Leu	Ser	Lys	Thr	Thr	Asn	Ile	Ala	Glu	Glu	Thr	Ser	275	280	285	
Lys	Ile	Glu	Thr	Tyr	Ile	Ala	Lys	Pro	Ala	Leu	Pro	Gly	Thr	Ser	Thr	290	295	300	
Asn	Ser	Asn	Val	Ala	Pro	Leu	Cys	Gln	Ile	Thr	Val	Lys	Ile	Gly	Asn				

<400> 3664															
Asp	Pro	Asp	Thr	Leu	Leu	Glu	Trp	Leu	Gln	Met	Gly	Gln	Gly	Asp	Glu
1				5					10					15	
Arg	Asp	Met	Gln	Leu	Ile	Ala	Leu	Glu	Gln	Leu	Cys	Met	Leu	Leu	Leu
			20					25					30		
Met	Ser	Asp	Asn	Val	Asp	Arg	Cys	Phe	Glu	Thr	Cys	Pro	Pro	Arg	Thr
		35					40					45			
Phe	Leu	Pro	Ala	Leu	Tyr	Lys	Ile	Phe	Leu	Asp	Glu	Ser	Ala	Pro	Asp
	50					55					60				
Asn	Val	Leu	Glu	Val	Thr	Ala	Arg	Ala	Ile	Thr	Tyr	Tyr	Leu	Asp	Val
65					70					75					80
Ser	Ala	Glu	Cys	Thr	Arg	Arg	Ile	Val	Gly	Val	Asp	Gly	Ala	Ile	Lys
				85					90					95	
Ala	Leu	Cys	Asn	Arg	Leu	Val	Val	Val	Glu	Leu	Asn	Asn	Arg	Thr	Ser

```
<210> 3665
<211> 6633
<212> DNA
<213> Homo sapiens
```

2815

ccattcattg gttttacatt cacaacggaa agctgttttt ctgatcgagg ctctctgaag
1320
agcataatgc agtccaacac attaaccaaa gatgaggatg tgcagcggga cctggagcac
1380
agcctgcaga tggaagctta cgagaggagg attcggaggc tggaacagga gaagctggag
1440
ctgagcagga agctgcaaga gtccacccag accgtgcagt ccctccacgg ctcatctcgg
1500
gccctcagca attcaaaccg agataaagaa atcaaaaagc taaatgaaga aatcgaacgc
1560
ttgaagaata aaatagcaga ttcaaacagg ctggagcgcac agcttgagga cacagtggcg
1620
cttcgccaag agcgtgagga ctccacgcag cggctgcggg ggctggagaa gcagcacccg
1680
gtggtccggc aggagaagga ggagctgcac aagcaactgg ttgaagcctc agagcggttg
1740
aatcccagg ccaaggaact caaagatgcc catcagcagc gaaagctggc cctgcaggag
1800
ttctcggagc tgaacgagcg catggcagag ctccgtgccc agaagcagaa ggtgtcccgg
1860
cagctgcgag acaaggagga ggagatggag gtggccacgc agaaggtgga cgccatgcgg
1920
caggaaatgc ggagagctga gaagctcagg aaagagctgg aagctcagct tgatgatgct
1980
gttgctgagg cctccaagga gcgcaagctt cgtgagcaca gcgagaactt ctgcaagcaa
2040
atggaaaagc agctggaggc cctcaagggtg aagcaaggag gccggggagc ggggtgccacc
2100
ttagagcacc agcaagagat ttccaaaatc aaatccgagc tggagaagaa agtcttattt
2160
tatgaagagg aattggtcag acgtgaggcc tcccatgtgc tagaagtga aaatgtgaag
2220
aaggaggtgc atgattcaga aagccaccag ctggccctgc agaaagaaat cttgatgtta
2280
aaagataagt tagaaaagtc aaagcgagaa cggcataacg agatggagga ggcagtaggt
2340
acaataaaaag ataaatacga acgagaaaga gcgatgctgt ttgatgaaaa caagaagcta
2400
actgctgaaa atgaaaagct ctgttccttt gtggataaac tcacagctca aaatagacag
2460
ctggaggatg agctgcagga tctggcagcc aagaaggagt cagtggccca ctgggaagct
2520
cagattgcgg aaatcattca gtgggtcagt gacgagaaag atgcccgggg ttaccttcaa
2580
gctcttgctt ccaagatgac cgaagagctc gaggctttga ggagttctag tctggggtca
2640
agaacactgg acccgctgtg gaagggtgcg cgagccaga agctggacat gtccgcgcgg
2700
ctggagctgc agtcggccct ggaggcggag atccgggcca agcagcttgt ccaggaggag
2760
ctcaggaagg tcaaggacgc caacctcacc ttggaaagca aactaaagga ttccgaagcc
2820
aaaaacagag aattattaga agaaatggaa attttgaaga aaaagatgga agaaaaattc
2880

agagcagata ctgggctcaa acttccagat tttcaggatt ccatttttga gtatttcaac
2940
actgctcctc ttgcacatga cctgacattt agagactctc tctcctcctc gtctgcatct
3000
tccttgctag ccttttgga agaaaccagc tcagctagtg agcaagaaac acaagctccg
3060
aagccagaag cgtccccgtc gatgtctgtg gctgcatcag agcagcagga ggacatggct
3120
cgcccccg c agaggccatc cgctgtgccg ttgccacca cgcaggccct ggctctggct
3180
ggaccgaagc caaaagctca ccagttcagc atcaagtcc tctccagccc tactcagtgc
3240
agccactgca cctccctgat ggttgggctg atccggcagg gctacgcctg cgaggtgtgt
3300
tcctttgctt gccacgtgtc ctgcaaagac ggtgcccccc aggtgtgccc aatacctccc
3360
gagcagcca agaggcctct gggcgtggac gtgcagcgag gcatcggaac agcctacaaa
3420
ggccatgtca aggtcccaaa gccacgggg gtgaagaagg gatggcagcg cgcatatgca
3480
gtcgtctgtg actgcaagct cttcctgtat gatctgctg aaggaaaatc caccagcct
3540
ggtgtcattg cgagccaagt cttggatctc agagatgacg agttttccgt gagctcagtc
3600
ctggcctcag atgtcattca tgctacacgc cgagatattc catgtatatt cagggtgacg
3660
gcctctctct taggtgcacc ttctaagacc agctcgctgc tcattctgac agaaaatgag
3720
aatgaaaaga ggaagtgggt tgggattcta gaaggactcc agtccatcct tcataaaaac
3780
cggctgagga atcaggctcg gcatgttccc ttggaagcct acgacagctc gctgcctctc
3840
atcaaggcca tcctgacagc tgccatcgtg gatgcagaca ggattgcagt cggcctagaa
3900
gaagggctct atgtcataga ggtcaccgga gatgtgatcg tccgtgccgc tgactgtaag
3960
aaggtacacc agatcgagct tgctcccagg gagaagatcg taatcctcct ctgtggccgg
4020
aaccaccatg tgcacctcta tccgtggctg tcccttgatg gagcgggaagg cagctttgac
4080
atcaagcttc cggaaaccaa aggctgccag ctcatggcca cggccacact caagaggaac
4140
tctggcacct gcctgtttgt ggccgtgaaa cggctgatcc tttgctatga gatccagaga
4200
acgaagccat tccacagaaa gttcaatgag attgtggctc ccggcagcgt gcagtgcctg
4260
gcggtgctca gggacaggct ctgtgtgggc tacccttctg ggttctgcct gctgagcatc
4320
cagggggacg ggcagcctct aaacctggta aatcccaatg acccctcgct tgcgttcctc
4380
tcacaacagt cttttgatgc cttttgtgct gtggagctcg aaagcgagga gtacctgctt
4440
tgcttcagcc acatgggact gtacgtggac ccgcaaggcc ggagggcacg cgcgcaggag
4500

ctcatgtggc ctgcggctcc tgtcgctgt agttgcagcc ccacccacgt cacggtgtac
4560
agcgagtatg gcgtggacgt ctttgatgtg cgcaccatgg agtgggtgca gaccatcggc
4620
ctgcggagga taaggccct gaactctgaa ggcacccctca acctcctcaa ctgcgagcct
4680
ccacgcttga tctacttcaa gagcaagttc tcgggagcgg ttctcaacgt gccggacacc
4740
tccgacaaca gcaagaagca gatgctgcgc accaggagca aaaggcgggtt cgtcttcaag
4800
gtcccagagg aagagagact gcagcagagg cgagagatgc ttagagaccc agaattgaga
4860
tccaaaatga tatccaacc aaccaacttc aaccacgtgg ccacatggg ccagggcgac
4920
ggcatgcagg tgctcatgga cctgcctctg agtgctgtgc cccctccca ggaggaaagg
4980
ccgggccccg ctcccaccaa cctggctcgc cagcctccat ccaggaacaa gccctacatc
5040
tcgtggccct catcaggtgg atcggagcct agcgtgactg tgctctgag aagtatgtct
5100
gatccagacc aggactttga caaagagcct gattcggact ccaccaaaca ctcaactcca
5160
tcgaatatgct ccaaccccag cggcccaccg agccccaact ccccccacag gagccagctc
5220
cccctcgaag gcctggagca gccggcctgt gacacctgaa gccgccagct cgccacaggg
5280
gccagggagc tggagatggc ctccagcgtc agtgccaaga ctgagcgggc cctccagtgt
5340
tgtccaagga aatgtagaat cactttgtag atatggagat gaagaagaca aatctttatt
5400
ataatattga tcagttttat gccgcattgt tcgtggcagt agaccacatc tgttcgtctg
5460
cacagctgtg aggcgatgct gttccatctg cacatgaagg acccccatac agcctgtctc
5520
ccacccctga caacccgaga gggcatatgg ggcctgcca acaccacttc ctacagagaa
5580
accgctcatg acgcggctgc ttcggaagca gacatctggg gacacagcct cagtaccag
5640
tcttttccct agttcctgaa actttcctag gaccttaaga gaatagtagg aggtcctata
5700
gcattcccag tgtcactaga attttgaaga caggaaagtg gaggttagtc tgtggccttt
5760
ttttcattta gccattgcac agtcagctgc agaagtctg ctgaccacct agtcatggac
5820
aaaggcccag gaccagtgc accctgcgtc cctgtgtgca ttaagttcat tctgggtcgc
5880
agccatgaag tgtcaccagt atctactact gtgaagtcag ctgtgctgtt ttccattcgc
5940
ttccactgct tctgcctcct gccataaaac cagcgagtgt cgtgggtgcag gcaggccctg
6000
tggcctgctg ggctgaggga agtcagagcc ccagggcgcc acgaagcagc cactgggata
6060
ccccaccccc cccgcctctg cccgcccccc cccaccagt cctgcccccg catggagccc
6120

ccgtgattag tagcccgat gatcacgtag acccaccacaa cacactcctg cacactggcc
 6180
 ccggcccacg gcacagcaat cccctgcgcg tggatttcac ctcacccttt gtaccagatg
 6240
 ttgagtgacc agctctgtgg cccctgtgtcg tcagaggctt gtgattaact gtggcggcag
 6300
 acacagcttg tccacagctt gggccaggct tcccctgtcc tcccaccggt cggctgcttg
 6360
 gcaaggctgt tcaggacgtg cacttcccca agtcggcact gagtggccca gcaccaccta
 6420
 gccctgccac cccactgccc tccctgggcct tctgctggat gggcacctgg ggggttctgg
 6480
 tttttacttt tttaatgtaa gtctcagtct ttgtaattaa ttattgaatt gtgagaacat
 6540
 ttttgaacaa tttacctgtc aataaagcag aagacggcag ttttaaagtt aaaaaaaaaa
 6600
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa
 6633

<210> 3666

<211> 1728

<212> PRT

<213> Homo sapiens

<400> 3666

Met	Ser	Ala	Lys	Val	Arg	Leu	Lys	Lys	Leu	Glu	Gln	Leu	Leu	Leu	Asp
1			5						10					15	
Gly	Pro	Trp	Arg	Asn	Glu	Ser	Ala	Leu	Ser	Val	Glu	Thr	Leu	Leu	Asp
			20					25					30		
Val	Leu	Val	Cys	Leu	Tyr	Thr	Glu	Cys	Ser	His	Ser	Ala	Leu	Arg	Arg
		35					40					45			
Asp	Lys	Tyr	Val	Ala	Glu	Phe	Leu	Glu	Trp	Ala	Lys	Pro	Phe	Thr	Gln
	50					55					60				
Leu	Val	Lys	Glu	Met	Gln	Leu	His	Arg	Glu	Asp	Phe	Glu	Ile	Ile	Lys
65					70					75					80
Val	Ile	Gly	Arg	Gly	Ala	Phe	Gly	Glu	Val	Ala	Val	Val	Lys	Met	Lys
			85					90						95	
Asn	Thr	Glu	Arg	Ile	Tyr	Ala	Met	Lys	Ile	Leu	Asn	Lys	Trp	Glu	Met
			100					105					110		
Leu	Lys	Arg	Ala	Glu	Thr	Ala	Cys	Phe	Arg	Glu	Glu	Arg	Asp	Val	Leu
		115					120					125			
Val	Asn	Gly	Asp	Cys	Gln	Trp	Ile	Thr	Ala	Leu	His	Tyr	Ala	Phe	Gln
	130					135						140			
Asp	Glu	Asn	His	Leu	Tyr	Leu	Val	Met	Asp	Tyr	Tyr	Val	Gly	Gly	Asp
145					150					155					160
Leu	Leu	Thr	Leu	Leu	Ser	Lys	Phe	Glu	Asp	Lys	Leu	Pro	Glu	Asp	Met
			165						170					175	
Ala	Arg	Phe	Tyr	Ile	Gly	Glu	Met	Val	Leu	Ala	Ile	Asp	Ser	Ile	His
			180					185					190		
Gln	Leu	His	Tyr	Val	His	Arg	Asp	Ile	Lys	Pro	Asp	Asn	Val	Leu	Leu
		195					200					205			
Asp	Val	Asn	Gly	His	Ile	Arg	Leu	Ala	Asp	Phe	Gly	Ser	Cys	Leu	Lys
	210					215					220				
Met	Asn	Asp	Asp	Gly	Thr	Val	Gln	Ser	Ser	Val	Ala	Val	Gly	Thr	Pro

225		230		235		240
Asp Tyr Ile Ser Pro Glu Ile Leu Gln Ala Met Glu Asp Gly Met Gly						
	245		250		255	
Lys Tyr Gly Pro Glu Cys Asp Trp Trp Ser Leu Gly Val Cys Met Tyr						
	260		265		270	
Glu Met Leu Tyr Gly Glu Thr Pro Phe Tyr Ala Glu Ser Leu Val Glu						
	275		280		285	
Thr Tyr Gly Lys Ile Met Asn His Glu Glu Arg Phe Gln Phe Pro Ser						
	290		295		300	
His Val Thr Asp Val Ser Glu Glu Ala Lys Asp Leu Ile Gln Arg Leu						
305		310		315		320
Ile Cys Ser Arg Glu Arg Arg Leu Gly Gln Asn Gly Ile Glu Asp Phe						
	325		330		335	
Lys Lys His Ala Phe Phe Glu Gly Leu Asn Trp Glu Asn Ile Arg Asn						
	340		345		350	
Leu Glu Ala Pro Tyr Ile Pro Asp Val Ser Ser Pro Ser Asp Thr Ser						
	355		360		365	
Asn Phe Asp Val Asp Asp Asp Val Leu Arg Asn Thr Glu Ile Leu Pro						
	370		375		380	
Pro Gly Ser His Thr Gly Phe Ser Gly Leu His Leu Pro Phe Ile Gly						
385		390		395		400
Phe Thr Phe Thr Thr Glu Ser Cys Phe Ser Asp Arg Gly Ser Leu Lys						
	405		410		415	
Ser Ile Met Gln Ser Asn Thr Leu Thr Lys Asp Glu Asp Val Gln Arg						
	420		425		430	
Asp Leu Glu His Ser Leu Gln Met Glu Ala Tyr Glu Arg Arg Ile Arg						
	435		440		445	
Arg Leu Glu Gln Glu Lys Leu Glu Leu Ser Arg Lys Leu Gln Glu Ser						
	450		455		460	
Thr Gln Thr Val Gln Ser Leu His Gly Ser Ser Arg Ala Leu Ser Asn						
465		470		475		480
Ser Asn Arg Asp Lys Glu Ile Lys Lys Leu Asn Glu Glu Ile Glu Arg						
	485		490		495	
Leu Lys Asn Lys Ile Ala Asp Ser Asn Arg Leu Glu Arg Gln Leu Glu						
	500		505		510	
Asp Thr Val Ala Leu Arg Gln Glu Arg Glu Asp Ser Thr Gln Arg Leu						
	515		520		525	
Arg Gly Leu Glu Lys Gln His Arg Val Val Arg Gln Glu Lys Glu Glu						
	530		535		540	
Leu His Lys Gln Leu Val Glu Ala Ser Glu Arg Leu Lys Ser Gln Ala						
545		550		555		560
Lys Glu Leu Lys Asp Ala His Gln Gln Arg Lys Leu Ala Leu Gln Glu						
	565		570		575	
Phe Ser Glu Leu Asn Glu Arg Met Ala Glu Leu Arg Ala Gln Lys Gln						
	580		585		590	
Lys Val Ser Arg Gln Leu Arg Asp Lys Glu Glu Glu Met Glu Val Ala						
	595		600		605	
Thr Gln Lys Val Asp Ala Met Arg Gln Glu Met Arg Arg Ala Glu Lys						
	610		615		620	
Leu Arg Lys Glu Leu Glu Ala Gln Leu Asp Asp Ala Val Ala Glu Ala						
625		630		635		640
Ser Lys Glu Arg Lys Leu Arg Glu His Ser Glu Asn Phe Cys Lys Gln						
	645		650		655	
Met Glu Ser Glu Leu Glu Ala Leu Lys Val Lys Gln Gly Gly Arg Gly						

2821

1090	1095	1100
Val Asp Val Gln Arg Gly Ile Gly Thr Ala Tyr Lys Gly His Val Lys		
1105	1110	1115
Val Pro Lys Pro Thr Gly Val Lys Lys Gly Trp Gln Arg Ala Tyr Ala		1120
	1125	1130
Val Val Cys Asp Cys Lys Leu Phe Leu Tyr Asp Leu Pro Glu Gly Lys		1135
	1140	1145
Ser Thr Gln Pro Gly Val Ile Ala Ser Gln Val Leu Asp Leu Arg Asp		1150
	1155	1160
Asp Glu Phe Ser Val Ser Ser Val Leu Ala Ser Asp Val Ile His Ala		1165
	1170	1175
Thr Arg Arg Asp Ile Pro Cys Ile Phe Arg Val Thr Ala Ser Leu Leu		1180
1185	1190	1195
Gly Ala Pro Ser Lys Thr Ser Ser Leu Leu Ile Leu Thr Glu Asn Glu		1200
	1205	1210
Asn Glu Lys Arg Lys Trp Val Gly Ile Leu Glu Gly Leu Gln Ser Ile		1215
	1220	1225
Leu His Lys Asn Arg Leu Arg Asn Gln Val Val His Val Pro Leu Glu		1230
	1235	1240
Ala Tyr Asp Ser Ser Leu Pro Leu Ile Lys Ala Ile Leu Thr Ala Ala		1245
	1250	1255
Ile Val Asp Ala Asp Arg Ile Ala Val Gly Leu Glu Glu Gly Leu Tyr		1260
1265	1270	1275
Val Ile Glu Val Thr Arg Asp Val Ile Val Arg Ala Ala Asp Cys Lys		1280
	1285	1290
Lys Val His Gln Ile Glu Leu Ala Pro Arg Glu Lys Ile Val Ile Leu		1295
	1300	1305
Leu Cys Gly Arg Asn His His Val His Leu Tyr Pro Trp Ser Ser Leu		1310
	1315	1320
Asp Gly Ala Glu Gly Ser Phe Asp Ile Lys Leu Pro Glu Thr Lys Gly		1325
	1330	1335
Cys Gln Leu Met Ala Thr Ala Thr Leu Lys Arg Asn Ser Gly Thr Cys		1340
1345	1350	1355
Leu Phe Val Ala Val Lys Arg Leu Ile Leu Cys Tyr Glu Ile Gln Arg		1360
	1365	1370
Thr Lys Pro Phe His Arg Lys Phe Asn Glu Ile Val Ala Pro Gly Ser		1375
	1380	1385
Val Gln Cys Leu Ala Val Leu Arg Asp Arg Leu Cys Val Gly Tyr Pro		1390
	1395	1400
Ser Gly Phe Cys Leu Leu Ser Ile Gln Gly Asp Gly Gln Pro Leu Asn		1405
	1410	1415
Leu Val Asn Pro Asn Asp Pro Ser Leu Ala Phe Leu Ser Gln Gln Ser		1420
1425	1430	1435
Phe Asp Ala Leu Cys Ala Val Glu Leu Glu Ser Glu Glu Tyr Leu Leu		1440
	1445	1450
Cys Phe Ser His Met Gly Leu Tyr Val Asp Pro Gln Gly Arg Arg Ala		1455
	1460	1465
Arg Ala Gln Glu Leu Met Trp Pro Ala Ala Pro Val Ala Cys Ser Cys		1470
	1475	1480
Ser Pro Thr His Val Thr Val Tyr Ser Glu Tyr Gly Val Asp Val Phe		1485
	1490	1495
Asp Val Arg Thr Met Glu Trp Val Gln Thr Ile Gly Leu Arg Arg Ile		1500
1505	1510	1515
Arg Pro Leu Asn Ser Glu Gly Thr Leu Asn Leu Leu Asn Cys Glu Pro		1520

	1525		1530		1535
Pro Arg Leu Ile Tyr Phe Lys Ser Lys Phe Ser Gly Ala Val Leu Asn					
	1540		1545		1550
Val Pro Asp Thr Ser Asp Asn Ser Lys Lys Gln Met Leu Arg Thr Arg					
	1555		1560		1565
Ser Lys Arg Arg Phe Val Phe Lys Val Pro Glu Glu Glu Arg Leu Gln					
	1570		1575		1580
Gln Arg Arg Glu Met Leu Arg Asp Pro Glu Leu Arg Ser Lys Met Ile					
1585		1590		1595	1600
Ser Asn Pro Thr Asn Phe Asn His Val Ala His Met Gly Pro Gly Asp					
	1605		1610		1615
Gly Met Gln Val Leu Met Asp Leu Pro Leu Ser Ala Val Pro Pro Ser					
	1620		1625		1630
Gln Glu Glu Arg Pro Gly Pro Ala Pro Thr Asn Leu Ala Arg Gln Pro					
	1635		1640		1645
Pro Ser Arg Asn Lys Pro Tyr Ile Ser Trp Pro Ser Ser Gly Gly Ser					
	1650		1655		1660
Glu Pro Ser Val Thr Val Pro Leu Arg Ser Met Ser Asp Pro Asp Gln					
1665		1670		1675	1680
Asp Phe Asp Lys Glu Pro Asp Ser Asp Ser Thr Lys His Ser Thr Pro					
	1685		1690		1695
Ser Asn Ser Ser Asn Pro Ser Gly Pro Pro Ser Pro Asn Ser Pro His					
	1700		1705		1710
Arg Ser Gln Leu Pro Leu Glu Gly Leu Glu Gln Pro Ala Cys Asp Thr					
	1715		1720		1725

<210> 3667

<211> 505

<212> DNA

<213> Homo sapiens

<400> 3667

tgtacattaa tctaaatacc tggatttaca ttgatatttt aatatttgta aatttcattgt
60

taattcccta tgtaacaag ttttaataagt catctgtaac agtacaatta agtccatata
120

tgattgtatt tactctttct tccctactca tagtatgcgt tccattttga ggaatcacag
180

atatacgaaga gatgccagaa cactagaaga tgaagaagag atgtgggttta acacagatga
240

agatgacatg gaagatggag aagctgtagt gtctccatct gacaaaacta aaaatgatga
300

tgatattatg gatccaataa gtaaattcat ggaaaggaag aaattaaaag aaagtgagga
360

aaaggaagtg cttctgaaaa caaacctttc tggacggcag agcccaagtt tcaagctttc
420

cctgtccagt ggaacgaaga ctaacctcac cagccagtca tctacaacaa atctgcctgg
480

ttctccggga tcacctggat cccca
505

<210> 3668

<211> 117

<212> PRT

<213> Homo sapiens

<400> 3668

```

Met Arg Ser Ile Leu Arg Asn His Arg Tyr Arg Arg Asp Ala Arg Thr
 1           5           10           15
Leu Glu Asp Glu Glu Glu Met Trp Phe Asn Thr Asp Glu Asp Asp Met
           20           25           30
Glu Asp Gly Glu Ala Val Val Ser Pro Ser Asp Lys Thr Lys Asn Asp
           35           40           45
Asp Asp Ile Met Asp Pro Ile Ser Lys Phe Met Glu Arg Lys Lys Leu
           50           55           60
Lys Glu Ser Glu Glu Lys Glu Val Leu Leu Lys Thr Asn Leu Ser Gly
65           70           75           80
Arg Gln Ser Pro Ser Phe Lys Leu Ser Leu Ser Ser Gly Thr Lys Thr
           85           90           95
Asn Leu Thr Ser Gln Ser Ser Thr Thr Asn Leu Pro Gly Ser Pro Gly
           100          105          110
Ser Pro Gly Ser Pro
           115

```

<210> 3669

<211> 1226

<212> DNA

<213> Homo sapiens

<400> 3669

```

cttgactccc agcattctca tctcaccttg ccatactata agatgtcttg tttgtctatg
60
gctgaggttc tggcccgcac ggactggaca gtagaggatg gattacagaa atacgagaga
120
ggattaatct ttacattaa tcattcactt tatgaaaacc tggatgaaga attaaatgaa
180
gaattagcag caaaagtggg tcagatgttt tatgtggctg agccaaagca agtgcccat
240
attctctgta gtccttctat gaagaatatt aatcctttaa ctgccatgag ctatctaagg
300
aagatggata cttctgggtt ttcattccatc ttagtgacac tgagcaaggc agcagtggca
360
ctgaaaatgg gagatcttga cgtgtacaga aatgaaatga aaagccatcc agagatgaag
420
ttggtgtgtg gtttcatttt ggaaccacgc ctgttgattc aacacaggaa gggacagatt
480
gttccaactg agcttgcgac tcacttgaag gagactcagc caggattgct tgtggcttca
540
gtcctgggat tgcagaagaa cagcaaaatt gggattgaag aagcagattc tttctttaag
600
gtgctttgtg gtaaggatga agataccatc cctcagctct tgatagactt ttgggaagct
660
cagctagtgg catgtctccc agatgtggta cttcaggaac tctttttcaa actcacatca
720
cagtacatct ggagattgtc taagaggcag cctcctgaca ccacaccatt gcgaacatcg
780
gaggatctga taaatgcctg tagtcattat ggcttaattt atccatgggt tcacgtcgta
840

```

atatcatctg attcttttagc tgataaaaaat tatacagaag atcttttcaaa attacagtct
 900
 cttatatgtg gtccttcatt tgacatagct tccattattc cgttcttgga gccactttca
 960
 gaagacacta ttgccggcct cagtgtccat gttctgtgtc gtacacgctt gaaagagtat
 1020
 gaacagtgca tagacatact gttagagaga tgcccggagg cagtcattcc atatgctaata
 1080
 catgaactga aagaagagaa ccggactctg tgggtggaaaa aactgttgcc tgaactttgt
 1140
 cagagaataa aatgtggtgg agagaagtat caactctacc tgtcatcatt aaaagcttaa
 1200
 ttttcacggg aactgtggaa gctagc
 1226

<210> 3670

<211> 385

<212> PRT

<213> Homo sapiens

<400> 3670

Met	Ser	Gly	Leu	Ser	Met	Ala	Glu	Val	Leu	Ala	Arg	Thr	Asp	Trp	Thr
1				5					10					15	
Val	Glu	Asp	Gly	Leu	Gln	Lys	Tyr	Glu	Arg	Gly	Leu	Ile	Phe	Tyr	Ile
			20					25					30		
Asn	His	Ser	Leu	Tyr	Glu	Asn	Leu	Asp	Glu	Glu	Leu	Asn	Glu	Glu	Leu
			35				40					45			
Ala	Ala	Lys	Val	Val	Gln	Met	Phe	Tyr	Val	Ala	Glu	Pro	Lys	Gln	Val
			50			55					60				
Pro	His	Ile	Leu	Cys	Ser	Pro	Ser	Met	Lys	Asn	Ile	Asn	Pro	Leu	Thr
65					70					75				80	
Ala	Met	Ser	Tyr	Leu	Arg	Lys	Met	Asp	Thr	Ser	Gly	Phe	Ser	Ser	Ile
				85					90					95	
Leu	Val	Thr	Leu	Ser	Lys	Ala	Ala	Val	Ala	Leu	Lys	Met	Gly	Asp	Leu
			100					105					110		
Asp	Val	Tyr	Arg	Asn	Glu	Met	Lys	Ser	His	Pro	Glu	Met	Lys	Leu	Val
			115				120					125			
Cys	Gly	Phe	Ile	Leu	Glu	Pro	Arg	Leu	Leu	Ile	Gln	His	Arg	Lys	Gly
			130				135				140				
Gln	Ile	Val	Pro	Thr	Glu	Leu	Ala	Thr	His	Leu	Lys	Glu	Thr	Gln	Pro
145					150					155				160	
Gly	Leu	Leu	Val	Ala	Ser	Val	Leu	Gly	Leu	Gln	Lys	Asn	Ser	Lys	Ile
			165						170					175	
Gly	Ile	Glu	Glu	Ala	Asp	Ser	Phe	Phe	Lys	Val	Leu	Cys	Gly	Lys	Asp
			180					185					190		
Glu	Asp	Thr	Ile	Pro	Gln	Leu	Leu	Ile	Asp	Phe	Trp	Glu	Ala	Gln	Leu
			195				200						205		
Val	Ala	Cys	Leu	Pro	Asp	Val	Val	Leu	Gln	Glu	Leu	Phe	Phe	Lys	Leu
			210			215					220				
Thr	Ser	Gln	Tyr	Ile	Trp	Arg	Leu	Ser	Lys	Arg	Gln	Pro	Pro	Asp	Thr
225					230					235				240	
Thr	Pro	Leu	Arg	Thr	Ser	Glu	Asp	Leu	Ile	Asn	Ala	Cys	Ser	His	Tyr
			245						250					255	
Gly	Leu	Ile	Tyr	Pro	Trp	Val	His	Val	Val	Ile	Ser	Ser	Asp	Ser	Leu

260 265 270
 Ala Asp Lys Asn Tyr Thr Glu Asp Leu Ser Lys Leu Gln Ser Leu Ile
 275 280 285
 Cys Gly Pro Ser Phe Asp Ile Ala Ser Ile Ile Pro Phe Leu Glu Pro
 290 295 300
 Leu Ser Glu Asp Thr Ile Ala Gly Leu Ser Val His Val Leu Cys Arg
 305 310 315 320
 Thr Arg Leu Lys Glu Tyr Glu Gln Cys Ile Asp Ile Leu Leu Glu Arg
 325 330 335
 Cys Pro Glu Ala Val Ile Pro Tyr Ala Asn His Glu Leu Lys Glu Glu
 340 345 350
 Asn Arg Thr Leu Trp Trp Lys Lys Leu Leu Pro Glu Leu Cys Gln Arg
 355 360 365
 Ile Lys Cys Gly Gly Glu Lys Tyr Gln Leu Tyr Leu Ser Ser Leu Lys
 370 375 380
 Ala
 385

<210> 3671

<211> 828

<212> DNA

<213> Homo sapiens

<400> 3671

nntacagcta agattcattt catacgtttg atgcttagct gaaaaattac aataaattct
 60
 ccaatgaaat tatgtatctt tatttaatga aaatgcctgc tgcgtaccaa ggtatgtact
 120
 agggcatctg gggtaagtaa aaacaaacac atagagcctg cctggagaag ctcatggtct
 180
 gatggaaaga taagcaagaa gagttaattt ctaatcaata tgataaaaag gtcagagagc
 240
 agtttctgaa aaacatgttt ttgagttgag tcttgaaaga caaggagatg ttagtaaagc
 300
 agagaaggga gaattcattc tagaaagatc agacaatgtg tgggaaggga agagtctgaa
 360
 aagagcatgc cccatttgga gaagcatcaa gaagcccacg cgtagaagc accggcccca
 420
 tgagacaaag acacagctag agagattgac taggcatgt cggaatgtcc tcttatttta
 480
 tacatacata agcatataga tacatatagc caaagttacc tttttaatga tcttttttac
 540
 ccagtgtatt ctggaggctc aatgggcaca tatgaacatc tccgagaggt tgtgtttggc
 600
 aaaagtgaag atgagcatta tcccctttgg aaatcagtca ttggagggat gatggctggt
 660
 gttattggcc agtttttagc caatccaact gacctagtga aggttcagat gcaaatggaa
 720
 ggaaaaagga aactggaagg aaaaccattg cgatttcgtg gtgtacatca tgcatttgca
 780
 aaaatcttag ctgaaggagg aatacgaggg ctttgggcag gctgggta
 828

<210> 3672

<211> 124
 <212> PRT
 <213> Homo sapiens

<400> 3672

```

Met Ser Glu Cys Pro Leu Ile Leu Tyr Ile His Lys His Ile Asp Thr
 1           5           10           15
Tyr Ser Gln Ser Tyr Leu Phe Asn Asp Leu Phe Tyr Pro Val Tyr Ser
          20           25           30
Gly Gly Arg Met Val Thr Tyr Glu His Leu Arg Glu Val Val Phe Gly
          35           40           45
Lys Ser Glu Asp Glu His Tyr Pro Leu Trp Lys Ser Val Ile Gly Gly
          50           55           60
Met Met Ala Gly Val Ile Gly Gln Phe Leu Ala Asn Pro Thr Asp Leu
65           70           75           80
Val Lys Val Gln Met Gln Met Glu Gly Lys Arg Lys Leu Glu Gly Lys
          85           90           95
Pro Leu Arg Phe Arg Gly Val His His Ala Phe Ala Lys Ile Leu Ala
          100          105          110
Glu Gly Gly Ile Arg Gly Leu Trp Ala Gly Trp Val
          115          120

```

<210> 3673
 <211> 1052
 <212> DNA
 <213> Homo sapiens

<400> 3673

```

nagatctcaa aatctggact tgaaaagaat tccttgatct atgaactttt ctctgttatg
60
gttcattctg ggagcgctgc tgggtggcat tattatgcat gtataaagtc attcagtgat
120
gagcagtggg acagcttcaa tgatcaacat gtcagcagga taacacaaga ggacattaag
180
aaaacacatg gtggatcttc aggaagcaga ggatattatt ctagtgcttt cgcaagttcc
240
acaaatgcat atatgctgat ctatagactg aaggatccag ccagaaatgc aaaatttcta
300
gaagtggatg aatacccaga acatattaaa aacttgggtgc agaaagagag agagttggaa
360
gaacaagaaa agagacaacg agaaattgag cgcaatacat gcaagataaa attattctgt
420
ttgcatccta caaaacaagt aatgatggaa aataaattgg aggttcataa ggataagaca
480
ttaaggaag cagtagaaat ggcttataag atgatggatt tagaagaggt aatacccctg
540
gattgctgtc gccttgtaa atatgatgag tttcatgatt atctagaacg gtcatatgaa
600
ggagaagaag atacaccaat ggggcttcta ctaggtggcg tcaagtcaac atatatgttt
660
gatctgctgt tggagacgag aaagcctgat caggttttcc aatcttataa acctggaggg
720
gagccatttt acaccatttt tagttgggtc gtacttagaa ttttctgag aaaggttttt
780

```

tttttattgt agcaatgaac ataatttaca ttttgtatat ggtcttaca tgtagaataa
 840
 ttttgacagg ttgagaagta ctcagcacca gcttggaatt aagttctaga ttacttgcaa
 900
 agagttgtgt acataatttt aaaaacaaca aaaaacaaca aagcttctag cttacgggtc
 960
 tcagtggggt ttttcttctc cagtgggcgg tactgaatca ttctggatgc tgtcaatccc
 1020
 taaagttatc aattgctctc ttaggaagat ct
 1052

<210> 3674

<211> 263

<212> PRT

<213> Homo sapiens

<400> 3674

Xaa	Ile	Ser	Lys	Ser	Gly	Leu	Glu	Lys	Asn	Ser	Leu	Ile	Tyr	Glu	Leu	1	5	10	15
Phe	Ser	Val	Met	Val	His	Ser	Gly	Ser	Ala	Ala	Gly	Gly	His	Tyr	Tyr	20	25	30	
Ala	Cys	Ile	Lys	Ser	Phe	Ser	Asp	Glu	Gln	Trp	Tyr	Ser	Phe	Asn	Asp	35	40	45	
Gln	His	Val	Ser	Arg	Ile	Thr	Gln	Glu	Asp	Ile	Lys	Lys	Thr	His	Gly	50	55	60	
Gly	Ser	Ser	Gly	Ser	Arg	Gly	Tyr	Tyr	Ser	Ser	Ala	Phe	Ala	Ser	Ser	65	70	75	80
Thr	Asn	Ala	Tyr	Met	Leu	Ile	Tyr	Arg	Leu	Lys	Asp	Pro	Ala	Arg	Asn	85	90	95	
Ala	Lys	Phe	Leu	Glu	Val	Asp	Glu	Tyr	Pro	Glu	His	Ile	Lys	Asn	Leu	100	105	110	
Val	Gln	Lys	Glu	Arg	Glu	Leu	Glu	Gln	Glu	Lys	Arg	Gln	Arg	Glu		115	120	125	
Ile	Glu	Arg	Asn	Thr	Cys	Lys	Ile	Lys	Leu	Phe	Cys	Leu	His	Pro	Thr	130	135	140	
Lys	Gln	Val	Met	Met	Glu	Asn	Lys	Leu	Glu	Val	His	Lys	Asp	Lys	Thr	145	150	155	160
Leu	Lys	Glu	Ala	Val	Glu	Met	Ala	Tyr	Lys	Met	Met	Asp	Leu	Glu	Glu	165	170	175	
Val	Ile	Pro	Leu	Asp	Cys	Cys	Arg	Leu	Val	Lys	Tyr	Asp	Glu	Phe	His	180	185	190	
Asp	Tyr	Leu	Glu	Arg	Ser	Tyr	Glu	Gly	Glu	Glu	Asp	Thr	Pro	Met	Gly	195	200	205	
Leu	Leu	Leu	Gly	Gly	Val	Lys	Ser	Thr	Tyr	Met	Phe	Asp	Leu	Leu	Leu	210	215	220	
Glu	Thr	Arg	Lys	Pro	Asp	Gln	Val	Phe	Gln	Ser	Tyr	Lys	Pro	Gly	Gly	225	230	235	240
Glu	Pro	Phe	Tyr	Thr	Ile	Phe	Ser	Trp	Ser	Val	Leu	Arg	Ile	Phe	Leu	245	250	255	
Arg	Lys	Val	Phe	Phe	Leu	Leu										260			

<210> 3675

<211> 837

<212> DNA

<213> Homo sapiens

<400> 3675

```

nntccggaga tgtgaagaag gggggcgagc ggacaggaag atgaaggag caaagctgcc
60
cgccgcggga caggcgtcta ggtgaacaag aaaatgaccg aagaaacaca cccagacgat
120
gacagctata ttgtgctgtg caaggctgtg gttatgacca gagatgactc cagcggggga
180
tggttccac aggaaggagg cgggatcagt cgcgtcgggg tctgtaaggt catgcacccc
240
gaaggcaatg gacgaagcgg ctttctcatc catggtgaac gacagaaaga caaactggtg
300
gtattggaat gctatgtaag aaaggacttg gtctacacca aagccaatcc aacgtttcat
360
cactggaagg tcgataatag gaagtttgga cttactttcc aaagccctgc tgatgcccga
420
gcctttgaca ggggagtaag gaaagcaatc gaagacctta tagaagaagt agaaaatgat
480
tctggcgggc ccagaaggct cctggcctac ccactgtcct cctgtaatca gaggccagg
540
gtgtacagct gccactgaaa aggaaaggga tctgtgacct ctggagccct ggttcggttt
600
aggccttggc ctatgggtaa gtgagtagta ggcattgtgt tacatctgat cgtggcctgg
660
agggcccttg ggcagtcagt tctcatggtg ggcttgacta gagtccacag atgcaaacac
720
aaaaattctc cactgcagca catccaggta tcaaatcaga gggttaaaga agccatagac
780
agggccctgt gaagaaagaa atatcaagca aggcattgta ataccaaatt cagatct
837

```

<210> 3676

<211> 154

<212> PRT

<213> Homo sapiens

<400> 3676

```

Met Thr Glu Glu Thr His Pro Asp Asp Asp Ser Tyr Ile Val Arg Val
1      5      10      15
Lys Ala Val Val Met Thr Arg Asp Asp Ser Ser Gly Gly Trp Phe Pro
20      25      30
Gln Glu Gly Gly Gly Ile Ser Arg Val Gly Val Cys Lys Val Met His
35      40      45
Pro Glu Gly Asn Gly Arg Ser Gly Phe Leu Ile His Gly Glu Arg Gln
50      55      60
Lys Asp Lys Leu Val Val Leu Glu Cys Tyr Val Arg Lys Asp Leu Val
65      70      75      80
Tyr Thr Lys Ala Asn Pro Thr Phe His His Trp Lys Val Asp Asn Arg
85      90      95
Lys Phe Gly Leu Thr Phe Gln Ser Pro Ala Asp Ala Arg Ala Phe Asp
100     105     110
Arg Gly Val Arg Lys Ala Ile Glu Asp Leu Ile Glu Glu Val Glu Asn

```

```

          115          120          125
Asp Ser Gly Gly Pro Arg Arg Leu Leu Ala Tyr Pro Leu Ser Ser Cys
      130          135          140
Asn Gln Arg Pro Arg Val Tyr Ser Cys His
145          150

```

<210> 3677
 <211> 418
 <212> DNA
 <213> Homo sapiens

```

<400> 3677
nnggaagaag gcccttctca aaatggactg gtgttgcagg gtgagaagct gccccctgac
60
ttcatgccaa agctcgtcaa gaatctccta ggcgagatgc ctctgtgggt ctgccagagt
120
tgccgaaaga gcatggagga agatgaaagg cagacaggtc gagaacatgc agtggcgatc
180
tccttgctac acacatcctg caaatcacag tcttgtggag atgactctca ttcgtctcgc
240
tcttctcct catcatcctc atcctcgtcc tcctcttct gccctgggaa ctcgggagac
300
tgggatccta gctcgttctc gtcggcacat aagctctcgg gcctctggaa ttccccacat
360
tccagtgggg ccatgccagg cagctctctt gggagtcctc ctaccatccc tggcgcgc
418

```

<210> 3678
 <211> 139
 <212> PRT
 <213> Homo sapiens

```

<400> 3678
Xaa Glu Glu Gly Pro Ser Gln Asn Gly Leu Val Leu Gln Gly Glu Lys
 1          5          10          15
Leu Pro Pro Asp Phe Met Pro Lys Leu Val Lys Asn Leu Leu Gly Glu
      20          25          30
Met Pro Leu Trp Val Cys Gln Ser Cys Arg Lys Ser Met Glu Glu Asp
      35          40          45
Glu Arg Gln Thr Gly Arg Glu His Ala Val Ala Ile Ser Leu Ser His
      50          55          60
Thr Ser Cys Lys Ser Gln Ser Cys Gly Asp Asp Ser His Ser Ser Ser
65          70          75          80
Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Cys Pro Gly
      85          90          95
Asn Ser Gly Asp Trp Asp Pro Ser Ser Phe Leu Ser Ala His Lys Leu
      100          105          110
Ser Gly Leu Trp Asn Ser Pro His Ser Ser Gly Ala Met Pro Gly Ser
      115          120          125
Ser Leu Gly Ser Pro Pro Thr Ile Pro Gly Ala
      130          135

```

<210> 3679
 <211> 567

<212> DNA

<213> Homo sapiens

<400> 3679

cgcggtgaagg gctatgacct ggagttaagt atggcgctgg ggacatacta cccacctccc
 60
 cgccctcaggc agctgctccc catgcttctt cagggaaacaa gtatcttcac tgcccctaag
 120
 gagatcgcag agatcaaggc ccagctggag acagccctga agtggaggaa ctatgaggtg
 180
 aagctgcggc tgctgctgca cctggaggaa ctgcagatgg agcatgatat ccggcactat
 240
 gacctggagt cggtgcccat gacctgggac cctgtggacc agaaccacag gctgctcacg
 300
 ctggagggttc ctggagtgc tgagagccgc ccctcagtgc tacggggcga ccacctgttt
 360
 gcccttttgt cctcggagac acaccaggag gaccccatca catataaggg ctttgtgcac
 420
 aaggtggaat tggacctgtg caagctgagc ttttccatga gcctcctgag ccgctttgtg
 480
 gatgggctga ccttcaaggt gaactttacc ttcaaccgcc agccgctgcg agtccagcac
 540
 cgtgcctggg agttgacagg gcgctgg
 567

<210> 3680

<211> 189

<212> PRT

<213> Homo sapiens

<400> 3680

Arg	Val	Lys	Gly	Tyr	Asp	Leu	Glu	Leu	Ser	Met	Ala	Leu	Gly	Thr	Tyr
1				5					10					15	
Tyr	Pro	Pro	Pro	Arg	Leu	Arg	Gln	Leu	Leu	Pro	Met	Leu	Leu	Gln	Gly
			20				25						30		
Thr	Ser	Ile	Phe	Thr	Ala	Pro	Lys	Glu	Ile	Ala	Glu	Ile	Lys	Ala	Gln
		35					40					45			
Leu	Glu	Thr	Ala	Leu	Lys	Trp	Arg	Asn	Tyr	Glu	Val	Lys	Leu	Arg	Leu
	50					55					60				
Leu	Leu	His	Leu	Glu	Glu	Leu	Gln	Met	Glu	His	Asp	Ile	Arg	His	Tyr
65				70						75				80	
Asp	Leu	Glu	Ser	Val	Pro	Met	Thr	Trp	Asp	Pro	Val	Asp	Gln	Asn	Pro
			85						90					95	
Arg	Leu	Leu	Thr	Leu	Glu	Val	Pro	Gly	Val	Thr	Glu	Ser	Arg	Pro	Ser
			100					105					110		
Val	Leu	Arg	Gly	Asp	His	Leu	Phe	Ala	Leu	Leu	Ser	Ser	Glu	Thr	His
		115					120					125			
Gln	Glu	Asp	Pro	Ile	Thr	Tyr	Lys	Gly	Phe	Val	His	Lys	Val	Glu	Leu
	130					135					140				
Asp	Arg	Val	Lys	Leu	Ser	Phe	Ser	Met	Ser	Leu	Leu	Ser	Arg	Phe	Val
145			150							155				160	
Asp	Gly	Leu	Thr	Phe	Lys	Val	Asn	Phe	Thr	Phe	Asn	Arg	Gln	Pro	Leu
			165					170					175		
Arg	Val	Gln	His	Arg	Ala	Trp	Glu	Leu	Thr	Gly	Arg	Trp			

180

185

<210> 3681
<211> 788
<212> DNA
<213> Homo sapiens

<400> 3681
nntgggcagt gtactcgggc ctccccgaca gcagctcctg tggggagcgc tcaccaccac
60
ccccgcctcc acttccttcg gatgaggccc tgctgcactg tgccttgga ggaaagctcc
120
gagaccggga ggcagagctt cagcagctgc gggacagcct ggggctgagc atggagcagc
180
gcggcggagg tcgcctgcga ggccgctggc caggcctgag cctctgccac catggccatt
240
gtgcagactc tgccagtgcc actggagcct gctcctgaag ctgccactgc ccacaagct
300
ccagtcatgg gtagtgtgag cagccttacc tcaggccggc cctgtcccgg ggggccagct
360
cctccccgcc accacggccc tcttggggcc accttcttcc gccagcagga tggcctgcta
420
cggggtggct atgaggcaca ggagccgctg tgcccagctg tgccccctag gaaggctgtc
480
cctgtcacca gcttcaccta catcaatgag gacttccgga cagagtcacc cccagccca
540
agcagtgatg ttgaggatgc ccgagagcag cgggcacaca atgcccacct ccgcgggcca
600
ccaccaaagc tcatccctgt ctctggaaag ctggagaaga acatagagaa gatcctgatc
660
cgcccaacag ccttcaagcc agtgctgccc aaacctcgag gggctccgtc cctgcctagc
720
ttcatgggtc ctcgggccac cgggctgtct gggagccagg gcagcctgac gcagctgttt
780
ggggggccc
788

<210> 3682
<211> 185
<212> PRT
<213> Homo sapiens

<400> 3682
Met Ala Ile Val Gln Thr Leu Pro Val Pro Leu Glu Pro Ala Pro Glu
1 5 10 15
Ala Ala Thr Ala Pro Gln Ala Pro Val Met Gly Ser Val Ser Ser Leu
20 25 30
Ile Ser Gly Arg Pro Cys Pro Gly Gly Pro Ala Pro Pro Arg His His
35 40 45
Gly Pro Pro Gly Pro Thr Phe Phe Arg Gln Gln Asp Gly Leu Leu Arg
50 55 60
Gly Gly Tyr Glu Ala Gln Glu Pro Leu Cys Pro Ala Val Pro Pro Arg
65 70 75 80
Lys Ala Val Pro Val Thr Ser Phe Thr Tyr Ile Asn Glu Asp Phe Arg

				85					90					95					
Thr	Glu	Ser	Pro	Pro	Ser	Pro	Ser	Ser	Asp	Val	Glu	Asp	Ala	Arg	Glu				
			100					105					110						
Gln	Arg	Ala	His	Asn	Ala	His	Leu	Arg	Gly	Pro	Pro	Pro	Lys	Leu	Ile				
		115					120					125							
Pro	Val	Ser	Gly	Lys	Leu	Glu	Lys	Asn	Ile	Glu	Lys	Ile	Leu	Ile	Arg				
	130					135					140								
Pro	Thr	Ala	Phe	Lys	Pro	Val	Leu	Pro	Lys	Pro	Arg	Gly	Ala	Pro	Ser				
145					150					155				160					
Leu	Pro	Ser	Phe	Met	Gly	Pro	Arg	Ala	Thr	Gly	Leu	Ser	Gly	Ser	Gln				
			165						170				175						
Gly	Ser	Leu	Thr	Gln	Leu	Phe	Gly	Gly											
		180						185											

<210> 3683

<211> 4421

<212> DNA

<213> Homo sapiens

<400> 3683

gcgccgctc gcgcgcagcc ccgcacctcc gccctgcct ctgcctcctg ggccatgccc
60
tgctgtttac atgccggtga ggtccccggc cgctccgaac ccctccgagc cccggctccc
120
cgagggtgaa gcccgccggc ccgcgaactg gactggtgga tctctcagac ctggggcccc
180
ggactccgat ctccgccgtc tccgccacca tcagggcggg atccggctct ggtgttttga
240
ggaggggggtg tgggtgtaggg aaaggaatcc cgtccctctc cacctttttt cgccttcggg
300
gcttcagact caggggaactc gctcatggct ttcttgatga agaagaagaa attcaaatc
360
caactactt tcacctgga ggagctgact gcggttcctc tcgtgaacgg ggtcctcttc
420
tgcaaggctc ggctgctgga tggaggggat tttgtcagct tgtcgtcaag ggaggaggta
480
caggagaact gtgtgcggtg gcgaaagagg ttcaccttcg tgtgtaagat gagtgtctaac
540
ccggccaccg gcctgctgga cccctgtgtc ttccgtgtgt ctgtgcgcaa ggagctgaaa
600
ggcggaagg cttattccaa gctgggcttc gctgacttga acctggccga gtttgcgggc
660
tcgggctcca cgggtgcgtg ctgcctgctc gagggatatg acacgaagaa cactcgccag
720
gacaactcca tccttaaggc caccattggc atgttcctgc tctctggaga tccctgcttc
780
aagacgccac catcgactgc caagtccatc tccatcccag gccaggatc ctccctgcag
840
ctgacgtgta aggggtggtg gaccagcagt gggggcagca gcaccaactc cctgactggg
900
tcccggcccc ccaaggctcg gccactatt ctcagctcag ggctgccaga ggaacccgac
960
cagaacctgt ccagccctga ggaggtgttc cactctggcc actcccga ctccagctat
1020

gccagccagc agtccaagat ctccggctac agcacagagc actcgcactc ctccagcctc
1080
tcagacctga cgcaccgccc caacacgtcc accagcagca gcgcctctgg gggccttggc
1140
atgaccgtgg agggccctga gggcagtgag cgggagcacc ggcccccgga gaagccgccc
1200
cggccacccc ggccccctgca tctgtccgat cgctctttca ggcggaagaa ggactcggtg
1260
gagagccacc cgacctgggt ggacgacacg cggatcgatg cggatgccat cgtggagaag
1320
atcgtgcaga gccaggactt cacagatggc agcaacaccg aggacagcaa cctccggctg
1380
ttcgtgagcc gcgatggctc tgccacgctg agcggcatcc agcttgccac cagggctctc
1440
tctggggtct acgagccagt tgtgattgaa agccattgag gagcaggtgt ccgggctgga
1500
gaagagtccct gctttctctg gagtccagac ctgtatcatt ccatgaggaa ctttccctt
1560
cagatcacct ctgcgccaca tctcatccat gcctcctcca tgcactccag tccacactcc
1620
ccgtagcatc attccattgc ccctcccatc catgctggga ccctcctggc ccaccaaggc
1680
ccaggcacca ctgtgaatat tctcctctga accactagag ggcaggccag gcaggccagg
1740
cgggcccgtg cagcttgtgg gcaagaagga gctggcaagg accggcgctg ctggagactg
1800
accagccct ctggctgagg acatgcagca gctcctaaat gtagagatgc ctgtggctga
1860
gggggcctct ctacctgtgt cccactcac tccaggagca ctggctttgg tcacgtctta
1920
gcagcagggc cttgtctcgt tgttcccttg ccctgggtgg gggggggcca gaccgcctcc
1980
ggaatcctgc cacctgtgac tgtctgactg cttagtgtt cagctgtccc ttccttgtgt
2040
cctgggggac ctgctggcgg cctcttcctg ggagccatga cctcagaccc caccacact
2100
ccagatcgag acccctgcct cccccggca aatgtcctcc cgctgccttg cagcctgcac
2160
tttgacatg ctcaccccca gcacagtccc actggcccct cacctcccct tccctgagct
2220
ccttcccaag gactcctggt cactgcctgc tgtgcagtca gaggcccagg gtccagcagc
2280
ccggcgggaa cgggtgctgc ctcttccctc agttagctcc agctcaggtc tgagaccctg
2340
gctgagaaaag gtctgagcac cgaccgtgcc ctctgcccag ggctgggtcc tgagcagctg
2400
gttttccctgc aggaagggtg gagcaagcaa agtccttctc tgccctcagg gtcagctgcc
2460
cagactgggg cggatgccag agaggcaggt gggctgtggc tggactggtc cggagctggc
2520
ttccttacca gaaaagcctc agccttccctc tggaagcatc cccgcttctg ggcaaggggg
2580
aagggtcct ttaaggggtg tgctttccca gtggggagca gtctggcct gcccctact
2640

aaagcctctg ctctcagcac ttcccccaa gtccttgtaa cttgcttgaa ggtgggttct
2700
ggctgccagc cagtccttgg acaaaactctc ctgccccctt taaatttcac tcattttgta
2760
taaaccagc aggctggtgt ttacttagcc ctgtagcttt tttcattttt tctttccgtc
2820
tttcttcttg agttcacggt tcaatattgc ctctcgccc tggtagaggg aggtgctgct
2880
tttctgcccc acctgccggc tggttccagc agcgctgggg ccagctggg gggccgggat
2940
gggggcttct ctctctggga ggggtgcagg tgccctcccc aggctgggag ggttccttcc
3000
ctagctcccc atctgcccc gctggtgaga gttgggcttc ttggtcttgg aactccttgg
3060
cattgggaac agagcatttc cagcatttgt tgttggtgtt ttactcacct aacccttaga
3120
aatgaatgt tagaaggtgc ctgccagagc gggacagagt gtttgctcgc gctggagaag
3180
gctctgctca gccctgagag tcccttctctg cccaccgat actggcactt taaaaaggaa
3240
gctgaccgca cagtgtccag acgaattggc cccagaaga tggggagtgc tgcctgccc
3300
ttctgtgtct gcgtgacctc acccagccta ggagggaggt gcattcaggg tagatttgcc
3360
tctcattcaa agttctgggg ctttgggagg aaaacagcca gctttggcgc tgttggggag
3420
actcctccag accaggaacc ccagaaggag acagagcctg ccacatctc ccacgccagg
3480
ccctgggcca ggggtgattgg actgagaatt tggccacaac caaattgatg ctggctggaa
3540
ccagaggcca gaaagcctgg ccttgctccc atgtgggagc cctgtcctca gccctcttgt
3600
ccccttgagc tcagtgaatt cccaccaggt gccacagct cctggacttc aaattctata
3660
tattgagaga gttggagagt atatcagaga tatttttgga aaggagtgg tctatgcaat
3720
gtcagtttgg aatcttcttg aaagttaaat gtttttatta ggagatttaa agaaaataaa
3780
ggtctacaat atcttttaggt tttttttttt tctgttttac cgcacaaact gaccacatgg
3840
catgtctatc aggatggagg gtgtccatgt tctcctctgt ctttagggag gtgataagga
3900
gatgggcgga ggggtgtttt tttctttgac tccccctctt tctaacagaa tgttgccacc
3960
actgcttgag tgggctgtgt ttgttctct gtcccagctt cttgttactt tatcatattg
4020
actttagggt caaaggcaac atcagaagaa gtcagatatg tatagtgaca ttccaggggt
4080
ggggaagggt tagggatcca gggttctccc ggtcttgagg acaggcacia tcatcacctt
4140
catcgttcca gattcctggg gagaaaactg agaagatcgt tacctgccag cctcatacgg
4200
agcaaaagct ctgtcctcag ggccaagttc taaccactgc tctgtagacc ttctctgcaa
4260

tcaagtggcc tctaaggagc atgcctgagg acaaataact gtgcctcagt ttcctcacct
 4320
 gcagatgggg ttatcaaata acacgagtgt gcagcctgac ctgcaggagg tgtgagtgtg
 4380
 ttcccaaact aaagccccag gctgccatca tttacaggct a
 4421

<210> 3684

<211> 384

<212> PRT

<213> Homo sapiens

<400> 3684

Met	Ala	Phe	Leu	Met	Lys	Lys	Lys	Lys	Phe	Lys	Phe	Gln	Thr	Thr	Phe
1				5					10					15	
Thr	Leu	Glu	Glu	Leu	Thr	Ala	Val	Pro	Phe	Val	Asn	Gly	Val	Leu	Phe
			20					25					30		
Cys	Lys	Val	Arg	Leu	Leu	Asp	Gly	Gly	Asp	Phe	Val	Ser	Leu	Ser	Ser
		35					40					45			
Arg	Glu	Glu	Val	Gln	Glu	Asn	Cys	Val	Arg	Trp	Arg	Lys	Arg	Phe	Thr
		50				55					60				
Phe	Val	Cys	Lys	Met	Ser	Ala	Asn	Pro	Ala	Thr	Gly	Leu	Leu	Asp	Pro
65				70					75					80	
Cys	Val	Phe	Arg	Val	Ser	Val	Arg	Lys	Glu	Leu	Lys	Gly	Gly	Lys	Ala
			85					90						95	
Tyr	Ser	Lys	Leu	Gly	Phe	Ala	Asp	Leu	Asn	Leu	Ala	Glu	Phe	Ala	Gly
			100					105						110	
Ser	Gly	Ser	Thr	Val	Arg	Cys	Cys	Leu	Leu	Glu	Gly	Tyr	Asp	Thr	Lys
		115					120					125			
Asn	Thr	Arg	Gln	Asp	Asn	Ser	Ile	Leu	Lys	Val	Thr	Ile	Gly	Met	Phe
		130				135					140				
Leu	Leu	Ser	Gly	Asp	Pro	Cys	Phe	Lys	Thr	Pro	Pro	Ser	Thr	Ala	Lys
145				150					155					160	
Ser	Ile	Ser	Ile	Pro	Gly	Gln	Asp	Ser	Ser	Leu	Gln	Leu	Thr	Cys	Lys
			165					170						175	
Gly	Gly	Gly	Thr	Ser	Ser	Gly	Gly	Ser	Ser	Thr	Asn	Ser	Leu	Thr	Gly
			180					185					190		
Ser	Arg	Pro	Pro	Lys	Ala	Arg	Pro	Thr	Ile	Leu	Ser	Ser	Gly	Leu	Pro
		195					200					205			
Glu	Glu	Pro	Asp	Gln	Asn	Leu	Ser	Ser	Pro	Glu	Glu	Val	Phe	His	Ser
		210				215					220				
Gly	His	Ser	Arg	Asn	Ser	Ser	Tyr	Ala	Ser	Gln	Gln	Ser	Lys	Ile	Ser
225				230					235					240	
Gly	Tyr	Ser	Thr	Glu	His	Ser	His	Ser	Ser	Ser	Leu	Ser	Asp	Leu	Thr
			245					250						255	
His	Arg	Arg	Asn	Thr	Ser	Thr	Ser	Ser	Ser	Ala	Ser	Gly	Gly	Leu	Gly
			260				265						270		
Met	Thr	Val	Glu	Gly	Pro	Glu	Gly	Ser	Glu	Arg	Glu	His	Arg	Pro	Pro
		275					280					285			
Glu	Lys	Pro	Pro	Arg	Pro	Pro	Arg	Pro	Leu	His	Leu	Ser	Asp	Arg	Ser
		290				295					300				
Phe	Arg	Arg	Lys	Lys	Asp	Ser	Val	Glu	Ser	His	Pro	Thr	Trp	Val	Asp
305				310					315					320	
Asp	Thr	Arg	Ile	Asp	Ala	Asp	Ala	Ile	Val	Glu	Lys	Ile	Val	Gln	Ser

				325					330					335					
Gln	Asp	Phe	Thr	Asp	Gly	Ser	Asn	Thr	Glu	Asp	Ser	Asn	Leu	Arg	Leu				
			340						345				350						
Phe	Val	Ser	Arg	Asp	Gly	Ser	Ala	Thr	Leu	Ser	Gly	Ile	Gln	Leu	Ala				
		355					360					365							
Thr	Arg	Val	Ser	Ser	Gly	Val	Tyr	Glu	Pro	Val	Val	Ile	Glu	Ser	His				
	370					375					380								

<210> 3685

<211> 1293

<212> DNA

<213> Homo sapiens

<400> 3685

```

tccatgcagc gatccccttg gccagaagaa ggtccattca ttcagttggg gggttcatct
60
cagacaacct cccgtcatca ccccttgagt gagacctaa ccttcaccgc agccttcgag
120
gtgccgtggg ctggtggggc cctcctgct cctctgtggc tctccccgcc gccattctga
180
tactggcgtc cccaatctcc ttgagaaacc atttctctta ctctgatgtc ttttcagaag
240
tcacatcctg ttctggggat gcacccctgc tctccagcc ccacccaaac tgacttaaca
300
cccaccaccc ttcccaggtc agcccaaagt ccacttcccc caggaagctc tcctgatgc
360
tgccctggat ggaatgagtc agacctgctg ttgtggggcc ctggccgcgc ctagatacac
420
ttctagggtc tatactcgag tatccagggt atctagggtc tatactcgag tatccagggt
480
accacactgc tgaagtggc ttctcctgat caggcatcaa ctctgggact gcgtttgccg
540
attctgttcc ctaacgcagc cgcagggggc agcacgctgc ctggcacgtc atggggggctc
600
ctccatgttg ggtggatatg cgaacggctt cctgagaaag tgcaggatgt aaaggaacgc
660
ggaggggtggc ggcggcgctg agggcagagg caaggcacac ggcgaggact gcgttggggc
720
ggcctgtggg ctgtttcaca gcagacaggg aatagcagca gcctgcagtg tgctccagaa
780
gacagtgggg aaggggcctg gctgacatct cgccaccggc tcagcctgta tcctccttcc
840
cccattcttc tgtgatcata aaggatccct tgagccactt gattttcaca ctgtcaatga
900
cctagagtca ccaaacacct ctcaacaagc cgtggtctcc acttgacatc tggaacaacg
960
ctcctcgggt ctgggaggac cacgcgtcga aagggaagag cagaggacgc tggctctcat
1020
ggcaggatgg tgtgtgtacg ggacgcgtct ttcgggagga tgacggcggc cttggagagc
1080
cccagaatgt cacaagcgtc catgaattcc ttcagactct ggaagctcga aacattctgc
1140
ctatctgagg ttgagatcag gatcacatca gagactccag ctctggccat tttagggtct
1200

```

gcacccctgac ccccatccct accccaggag ctgctgaaat gtcctcagag cttaggcgtg
 1260
 aagcaggggt tggtcagggg aggacagcgg ccg
 1293

<210> 3686
 <211> 111
 <212> PRT
 <213> Homo sapiens

<400> 3686
 Met Gly Glu Gly Gly Tyr Arg Leu Thr Gly Trp Arg Asp Val Ser Gln
 1 5 10 15
 Ala Pro Ser Pro Leu Ser Ser Gly Ala His Cys Arg Leu Leu Leu Phe
 20 25 30
 Pro Val Cys Cys Glu Thr Asp His Arg Pro Ala Gln Arg Ser Pro Arg
 35 40 45
 Arg Val Pro Cys Leu Cys Pro Pro Arg Arg Arg His Pro Pro Arg Ser
 50 55 60
 Phe Thr Ser Cys Thr Phe Ser Gly Ser Arg Ser His Ile His Pro Thr
 65 70 75 80
 Trp Arg Ser Pro His Asp Val Pro Gly Ser Val Leu Ala Pro Ala Ala
 85 90 95
 Ala Leu Gly Asn Arg Ile Gly Lys Arg Ser Pro Arg Val Asp Ala
 100 105 110

<210> 3687
 <211> 566
 <212> DNA
 <213> Homo sapiens

<400> 3687
 nncggggcca agctcaaagc ttccagccgc acgtctgcct tgctctcggg cttcgccatg
 60
 gtggccatgg tggaggtgca gctggagagt gaccacgagt acccaccagg cctgctggtg
 120
 gctgtgcacc tctttgcact catgngtctc cacgtgtctg ctgccccaca ttgaagctgt
 180
 nngagcaaca tccacaacct caactctgtc caccagtcgc cacaccagag actgcaccgc
 240
 tacgtggagc tggcctgggg cttctccact gccctgggca cctttctctt ccttgctgaa
 300
 gttgtcctgg ttggttgggt caagtttgtg cccattgggg ctcccttgga cacaccgacc
 360
 cccatggtgc ccacatcccg ggtgcccggt actctggcac cagtggctac ctcccttagt
 420
 ccagcttcca atctcccacg gtcctctgcg tctgcagcac cgtcccaggc tgagccagcc
 480
 tgcccacccc ggcaagcctg tgggtggtgg ggggcccatt ggccaggctg gcaagcagcc
 540
 atggcctcca cagccatcat ggtacc
 566

<210> 3688

<211> 57
 <212> PRT
 <213> Homo sapiens

<400> 3688
 Xaa Gly Ala Lys Leu Lys Ala Ser Ser Arg Thr Ser Ala Leu Leu Ser
 1 5 10 15
 Gly Phe Ala Met Val Ala Met Val Glu Val Gln Leu Glu Ser Asp His
 20 25 30
 Glu Tyr Pro Gly Leu Leu Val Ala Val His Leu Phe Ala Leu Met
 35 40 45
 Xaa Leu His Val Ser Ala Ala Pro His
 50 55

<210> 3689
 <211> 1562
 <212> DNA
 <213> Homo sapiens

<400> 3689
 ggggttggggg ggccggagca gagagcacc agcccgagg gtggatgaat gtgggagaaa
 60
 atggagacca agacgatcgt gtacgacttg gacacatcag gggggctgat ggagcaaata
 120
 caagctctgc tggctcccc caagacggac gaggcagaaa agcgcagtcg gaagcctgag
 180
 aaggagcccc ggagaagcgg cagggccacc aaccacgaca gctgcgatag ctgcaaggaa
 240
 ggtggagatc tctgtgctg cgaccactgc cgggctgcct tccacctcca gtgctgtaac
 300
 cctccactga gtgaagaaat gttgcctcct ggagagtggg tgtgtcaccg gtgcactggt
 360
 cgccgaaaga aacgagagca gaaaaaggag ctgggtcatg tcaatggact ggtggacaaa
 420
 tctggcaaac ggactacatc cccagcagt gacactgact tgttgagacag atcggccagc
 480
 aaaactgaac taaaggccat tgcccatgcc cggatcctgg aaaggagagc cagcaggcct
 540
 ggcacaccca catccagcgc cagcacagag actccacact ctgagcagaa tgatgtcgac
 600
 gaagacatca ttgacgtgga tgaggaacca gtagcagcgg agccagacta tgtgcagccc
 660
 cagctgaggg ggccctttga gctgctgatt gctgccgcca tggagcggaa cccacccaa
 720
 tttcagttgc ccaatgaact gacttgtaac actgcactac caggttctag caagaggaga
 780
 agaaaggagg aaaccacagg gaaaaatggt aagaagacac agcatgaatt agatcacaat
 840
 ggtctcgttc ccttaccctt caaagtctgc ttcacgtgta acaggagttg ccgtgtggct
 900
 cctctcatcc agtgtgacta ttgccctctc ctgtttcaca tggattgcct cgagccgccc
 960
 ctcaactgcc tgccctggg cagatggatg tgtccgaatc acatcgaaca tgtggtgctg
 1020

aaccagaaga atatgacact gagcaatcgg tgccaggtgt ttgatcgttt ccaggacacc
1080
gtttcgcagc atgtcgtcaa agtggacttc ctgaaccgaa tccacaagaa gcacccccct
1140
aaccggcgtg tgctccagtc ggtcaaaaga agaagcttga aggttcctga tgctataaaa
1200
tctcagtacc agtttccacc cctctcatt gcacccgcgg ccattcggga cggggagctg
1260
atctgcaatg ggatccctga ggaatcacag atgcaccttt tgaactctga gcacttagcc
1320
acccaagcag agcagcaaga gtggctctgt agtggttgtg cgctccagtg cagcatattg
1380
aaacatttat ctgctaagca gatgccttcg cattgggact ctgaacagac agagaaggct
1440
gatattaagc ctgttattgt gactgacagc tcagtcacca cctccctgca aacagctgac
1500
aagacaccta caccttccca ctacccttg tctgcccct cagggattag caccagaat
1560
tc
1562

<210> 3690

<211> 504

<212> PRT

<213> Homo sapiens

<400> 3690

Met	Trp	Glu	Lys	Met	Glu	Thr	Lys	Thr	Ile	Val	Tyr	Asp	Leu	Asp	Thr
1				5					10					15	
Ser	Gly	Gly	Leu	Met	Glu	Gln	Ile	Gln	Ala	Leu	Leu	Ala	Pro	Pro	Lys
			20					25					30		
Thr	Asp	Glu	Ala	Glu	Lys	Arg	Ser	Arg	Lys	Pro	Glu	Lys	Glu	Pro	Arg
			35					40					45		
Arg	Ser	Gly	Arg	Ala	Thr	Asn	His	Asp	Ser	Cys	Asp	Ser	Cys	Lys	Glu
			50				55					60			
Gly	Gly	Asp	Leu	Leu	Cys	Cys	Asp	His	Cys	Pro	Ala	Ala	Phe	His	Leu
65					70					75				80	
Gln	Cys	Cys	Asn	Pro	Leu	Ser	Glu	Glu	Met	Leu	Pro	Pro	Gly	Glu	
			85					90					95		
Trp	Met	Cys	His	Arg	Cys	Thr	Val	Arg	Arg	Lys	Lys	Arg	Glu	Gln	Lys
			100					105					110		
Lys	Glu	Leu	Gly	His	Val	Asn	Gly	Leu	Val	Asp	Lys	Ser	Gly	Lys	Arg
			115				120					125			
Thr	Thr	Ser	Pro	Ser	Ser	Asp	Thr	Asp	Leu	Leu	Asp	Arg	Ser	Ala	Ser
			130				135				140				
Lys	Thr	Glu	Leu	Lys	Ala	Ile	Ala	His	Ala	Arg	Ile	Leu	Glu	Arg	Arg
145					150					155				160	
Ala	Ser	Arg	Pro	Gly	Thr	Pro	Thr	Ser	Ser	Ala	Ser	Thr	Glu	Thr	Pro
				165				170					175		
Thr	Ser	Glu	Gln	Asn	Asp	Val	Asp	Glu	Asp	Ile	Ile	Asp	Val	Asp	Glu
			180					185					190		
Glu	Pro	Val	Ala	Ala	Glu	Pro	Asp	Tyr	Val	Gln	Pro	Gln	Leu	Arg	Arg
			195				200					205			
Pro	Phe	Glu	Leu	Leu	Ile	Ala	Ala	Ala	Met	Glu	Arg	Asn	Pro	Thr	Gln

210		215		220											
Phe	Gln	Leu	Pro	Asn	Glu	Leu	Thr	Cys	Thr	Thr	Ala	Leu	Pro	Gly	Ser
225					230						235				240
Ser	Lys	Arg	Arg	Arg	Lys	Glu	Glu	Thr	Thr	Gly	Lys	Asn	Val	Lys	Lys
				245						250					255
Thr	Gln	His	Glu	Leu	Asp	His	Asn	Gly	Leu	Val	Pro	Leu	Pro	Val	Lys
			260					265					270		
Val	Cys	Phe	Thr	Cys	Asn	Arg	Ser	Cys	Arg	Val	Ala	Pro	Leu	Ile	Gln
		275						280				285			
Cys	Asp	Tyr	Cys	Pro	Leu	Leu	Phe	His	Met	Asp	Cys	Leu	Glu	Pro	Pro
	290					295					300				
Leu	Thr	Ala	Met	Pro	Leu	Gly	Arg	Trp	Met	Cys	Pro	Asn	His	Ile	Glu
305					310					315					320
His	Val	Val	Leu	Asn	Gln	Lys	Asn	Met	Thr	Leu	Ser	Asn	Arg	Cys	Gln
				325					330					335	
Val	Phe	Asp	Arg	Phe	Gln	Asp	Thr	Val	Ser	Gln	His	Val	Val	Lys	Val
		340						345				350			
Asp	Phe	Leu	Asn	Arg	Ile	His	Lys	Lys	His	Pro	Pro	Asn	Arg	Arg	Val
	355						360					365			
Leu	Gln	Ser	Val	Lys	Arg	Arg	Ser	Leu	Lys	Val	Pro	Asp	Ala	Ile	Lys
	370				375					380					
Ser	Gln	Tyr	Gln	Phe	Pro	Pro	Pro	Leu	Ile	Ala	Pro	Ala	Ala	Ile	Arg
385				390					395						400
Asp	Gly	Glu	Leu	Ile	Cys	Asn	Gly	Ile	Pro	Glu	Glu	Ser	Gln	Met	His
			405					410						415	
Leu	Leu	Asn	Ser	Glu	His	Leu	Ala	Thr	Gln	Ala	Glu	Gln	Gln	Glu	Trp
		420						425					430		
Leu	Cys	Ser	Val	Val	Ala	Leu	Gln	Cys	Ser	Ile	Leu	Lys	His	Leu	Ser
	435						440					445			
Ala	Lys	Gln	Met	Pro	Ser	His	Trp	Asp	Ser	Glu	Gln	Thr	Glu	Lys	Ala
	450					455				460					
Asp	Ile	Lys	Pro	Val	Ile	Val	Thr	Asp	Ser	Ser	Val	Thr	Thr	Ser	Leu
465				470					475						480
Gln	Thr	Ala	Asp	Lys	Thr	Pro	Thr	Pro	Ser	His	Tyr	Pro	Leu	Ser	Cys
			485					490						495	
Pro	Ser	Gly	Ile	Ser	Thr	Gln	Asn								
		500													

<210> 3691

<211> 418

<212> DNA

<213> Homo sapiens

<400> 3691

```

ncggccgccc agttcgacgg gaggtggccc aggcaaatag tgtcatcgat tggcctatgt
60
cgttatggtg ggaggattga ctgctgctgg ggctgggctc gccagtcttg gggacagtgt
120
cagcctttct acgtcttaag gcagagaata gccaggataa ggtgccagct caaagctgtg
180
tgccaaccac gatgcaaaca tggatgaatgt atcggggccaa acaagtgcac gtgtcatcct
240
ggttatgctg gaaaaacctg taatcaaggt aggaaaacag tctgacataa atacacaatc
300

```

gaagacacct ctatcactcc caaattaaaa atattcttat ctcaaactac tttccatggc
 360
 tattttttcca aaatatgtga gctgccattt tgctgataaa taaaaatata ttaatgat
 418

<210> 3692

<211> 94

<212> PRT

<213> Homo sapiens

<400> 3692

Xaa	Ala	Ala	Glu	Phe	Asp	Gly	Arg	Trp	Pro	Arg	Gln	Ile	Val	Ser	Ser
1				5					10					15	
Ile	Gly	Leu	Cys	Arg	Tyr	Gly	Gly	Arg	Ile	Asp	Cys	Cys	Trp	Gly	Trp
			20					25					30		
Ala	Arg	Gln	Ser	Trp	Gly	Gln	Cys	Gln	Pro	Phe	Tyr	Val	Leu	Arg	Gln
			35				40					45			
Arg	Ile	Ala	Arg	Ile	Arg	Cys	Gln	Leu	Lys	Ala	Val	Cys	Gln	Pro	Arg
	50					55					60				
Cys	Lys	His	Gly	Glu	Cys	Ile	Gly	Pro	Asn	Lys	Cys	Lys	Cys	His	Pro
65					70					75				80	
Gly	Tyr	Ala	Gly	Lys	Thr	Cys	Asn	Gln	Gly	Arg	Lys	Thr	Val		
				85						90					

<210> 3693

<211> 2641

<212> DNA

<213> Homo sapiens

<400> 3693

cgcccgcgtc gacgggaaag agccgctaga gcagaccgcg ccgcccgcgg agccgcgcct
 60
 gccagggccc ggggagggag gaggcgggag tcaggggtgct gcgccccgct cggcgctccga
 120
 gcttccggcc gggctgtgcc ccgcgcggtc ttcgccggga tgaagcgccc ctgcgaggag
 180
 acgacctccg agagcgacat ggacgagacc atcgacgtgg ggagcgagaa caattactcg
 240
 gggcaaagta ctagctctgt gattagattg aattctccaa caacaacatc tcagattatg
 300
 gcaagaaaga aaaggagagg gattatagag aaaaggcgtc gggatcggat aaataacagt
 360
 ttatctgagt tgagaagact tgtgccaaact gcttttgaaa aacaaggatc tgcaaagtta
 420
 gaaaaagctg aaatatgtga aatgacagtg gatcatttga agatgcttca ggcaacaggg
 480
 ggtaaaggct actttgacgc acacgctctt gccatggact tcatgagcat aggattccga
 540
 gagtgcctaa cagaagttgc gcggtacctg agctccgtgg aaggcctgga ctctcggat
 600
 ccgctgcggg tgccgcttgt gtctcatctc agcacttgcg ccaccagcg ggaggcggcg
 660
 gccatgacat cctccatggc ccaccaenca tcatccgctc caccgcgcatc actgggcccgc
 720

cgcttccac cacctgcccg cagccctgct ccagcccaac ggctccatg cctcagagtc
780
aacccttgt cgctctcca caacttcaga agtgctccg cccacggctc tgctctcctc
840
acggccacgt ttgcccatgc ggattcagcc ctccgaatgc catccacggg cagcgtcgcc
900
ccctgcgtgc cacctctctc cacctctctc ttgtccctct ctgccaccgt ccacgccgca
960
gccgcagcag ccaccgcggc tgcacacagc ttccctctgt ccttcgcggg ggcattcccc
1020
atgcttcccc caaacgcagc agcagcagtg gccgcggcca cagccatcag cccgcccttg
1080
tcagtatcag ccacgtccag tcctcagcag accagcagtg gaacaaacaa taaaccttac
1140
cgaccctggg ggacagaagt tggagctttt taaatttttc ttgaacttct tgcaatagta
1200
actgaatgtc ctccatttca gagtcagctt aaaacctctg caccctgaag gtagccatac
1260
agatgccgac agatccacaa aggaacaata aagctatttg agacacaaac ctcacgagtg
1320
gaaatgtggg attctctttt tttctctctc cttttttgtt tggttcaagg cagctcggtg
1380
actgacatca gcaacttttg aaaacttcac acttgttacc atttagaagt ttcttgga
1440
atatatggac cgtaccatcc agcagtgcat cagtatgtct gaattgggga agtaaaatgc
1500
cctgactgaa ttctcttgag actagatggg acatacatat atagagagag agtgagagag
1560
tcgtgtttcg taagtgcctg agcttaggaa gttttcttct ggatatataa cattgcacaa
1620
gggaagacga gtgtggagga taggttaaga aaggaaaggg acagaagtct tgcaataggc
1680
tgcagacatt ttaataccat gccagagaag agtattctgc tgaaaccaac aggttttact
1740
ggtcaaaatg actgctgaaa ataattttca agttgaaaga tctagtttta tcttagtttg
1800
ccttctttgt acagacatgc caagagggtga catttagcag tgcattggta taagcaatta
1860
tttcatcagt tctcagatta acaagcattt ctgctctgcc tgcaggcccc caggcacttt
1920
ttttttggat ggctcaaaat atggtgcttc tttatataaa ctttacattt atatagtgca
1980
cctatgagca gttgcctacc atgtgtccac cagaggctat ttaattcatg ccaacttgaa
2040
aactctccag tttgtaggag tttggtttaa tttattcagt ttcattagga ctatttttat
2100
atatttatcc tcttcatttt ctccaatga tgcaacatct attcttgtca ccctttggga
2160
gaagttacat ttctggaggt gatgaagcaa ggaggagca ctaggaagag aaaagctaca
2220
atttttaag ctctttgtca agttagtgat tgcatttgat cccaaaacaa gatgaatgta
2280
tgcaatggga tgtacataag ttatttttgc ccatgcctaa actagtgcta tgtaatgggg
2340

ttgtggtttt gtttttttcg atttcgttta atgacaaaat aatctcttaa tatgctgaaa
 2400
 tcaagcacgt gagagttttt gtttaaaaga taagagacac agcatgtatt atgcacttca
 2460
 tttctctact gtgtggagaa agcaataaac attatgagaa tgttaaactg tatgcaaaaat
 2520
 tatacttttta aatatttggt ttgaaattac tgtacctagt cttttttgca ttactttgta
 2580
 acctttttct atgcaagagt ctttacatac cactaattaa atgaagtcct ttttgactat
 2640
 t
 2641

<210> 3694

<211> 390

<212> PRT

<213> Homo sapiens

<400> 3694

Arg	Pro	Arg	Arg	Arg	Glu	Arg	Ala	Ala	Arg	Ala	Asp	Arg	Ala	Ala	Ala
1				5					10					15	
Gly	Ala	Ala	Pro	Ala	Gln	Ala	Arg	Gly	Gly	Arg	Arg	Arg	Ala	Ser	Gly
			20					25					30		
Cys	Cys	Ala	Pro	Leu	Gly	Val	Arg	Ala	Ser	Gly	Arg	Ala	Val	Pro	Arg
		35					40					45			
Ala	Val	Phe	Ala	Gly	Met	Lys	Arg	Pro	Cys	Glu	Glu	Thr	Thr	Ser	Glu
	50					55					60				
Ser	Asp	Met	Asp	Glu	Thr	Ile	Asp	Val	Gly	Ser	Glu	Asn	Asn	Tyr	Ser
65					70				75					80	
Gly	Gln	Ser	Thr	Ser	Ser	Val	Ile	Arg	Leu	Asn	Ser	Pro	Thr	Thr	Thr
			85						90					95	
Ser	Gln	Ile	Met	Ala	Arg	Lys	Lys	Arg	Arg	Gly	Ile	Ile	Glu	Lys	Arg
			100					105					110		
Arg	Arg	Asp	Arg	Ile	Asn	Asn	Ser	Leu	Ser	Glu	Leu	Arg	Arg	Leu	Val
		115					120					125			
Pro	Thr	Ala	Phe	Glu	Lys	Gln	Gly	Ser	Ala	Lys	Leu	Glu	Lys	Ala	Glu
		130				135					140				
Ile	Leu	Gln	Met	Thr	Val	Asp	His	Leu	Lys	Met	Leu	Gln	Ala	Thr	Gly
145					150					155				160	
Gly	Lys	Gly	Tyr	Phe	Asp	Ala	His	Ala	Leu	Ala	Met	Asp	Phe	Met	Ser
			165						170					175	
Ile	Gly	Phe	Arg	Glu	Cys	Leu	Thr	Glu	Val	Ala	Arg	Tyr	Leu	Ser	Ser
			180					185					190		
Val	Glu	Gly	Leu	Asp	Ser	Ser	Asp	Pro	Leu	Arg	Val	Arg	Leu	Val	Ser
		195					200					205			
His	Leu	Ser	Thr	Cys	Ala	Thr	Gln	Arg	Glu	Ala	Ala	Ala	Met	Thr	Ser
	210					215						220			
Ser	Met	Ala	His	His	Xaa	Ser	Ser	Ala	Pro	Pro	Ala	Ser	Leu	Gly	Arg
225					230					235				240	
Arg	Leu	Pro	Pro	Pro	Ala	Arg	Ser	Pro	Ala	Pro	Ala	Gln	Arg	Pro	Pro
				245					250					255	
Cys	Leu	Arg	Val	Asn	Pro	Leu	Ser	Pro	Leu	His	Asn	Phe	Arg	Ser	Ala
			260				265						270		
Ser	Ala	His	Gly	Ser	Ala	Leu	Leu	Thr	Ala	Thr	Phe	Ala	His	Ala	Asp

275		280		285											
Ser	Ala	Leu	Arg	Met	Pro	Ser	Thr	Gly	Ser	Val	Ala	Pro	Cys	Val	Pro
290		295		300											
Pro	Leu	Ser	Thr	Ser	Leu	Leu	Ser	Leu	Ser	Ala	Thr	Val	His	Ala	Ala
305		310		315										320	
Ala	Ala	Ala	Ala	Thr	Ala	Ala	Ala	His	Ser	Phe	Pro	Leu	Ser	Phe	Ala
		325		330										335	
Gly	Ala	Phe	Pro	Met	Leu	Pro	Pro	Asn	Ala	Ala	Ala	Ala	Val	Ala	Ala
		340		345										350	
Ala	Thr	Ala	Ile	Ser	Pro	Pro	Leu	Ser	Val	Ser	Ala	Thr	Ser	Ser	Pro
	355			360										365	
Gln	Gln	Thr	Ser	Ser	Gly	Thr	Asn	Asn	Lys	Pro	Tyr	Arg	Pro	Trp	Gly
370		375		380											
Thr	Glu	Val	Gly	Ala	Phe										
385		390													

<210> 3695

<211> 1615

<212> DNA

<213> Homo sapiens

<400> 3695

```

nggaaaagta gcctaaagtc agtataacta aagggtggaa cgaggtggga caaggtccgg
60
aattgctgct cagtgatgtg tgtgtgectg ccgctgggtg agctgagact gctcatctca
120
gaaggatggg gatgcttgat ttcttgcca ggttgtccca gcacagtggg gattggccct
180
gttgtatgac gaagacagca catggtggca gagatagata ctaacccatg gactttccaa
240
gggagggaat aggtcttttg agggatatgca agacaaaggt agacactgga taaagaaccc
300
ggtagtgccc aggtattacc ccatctgggc cattactccc aactcagga accagacgtt
360
gtgggtgagg acatgctgtc ctcctgcca agtaataact tccttcccag ccaggatcct
420
gccccaaagta ggaatatagc tctgcattta cagcagctcc tgctcagacc ttgtcaaaac
480
caccctgcag cttaggatta aggagcatgg tcacaggaag gtgggggtttc agggcatccc
540
ctcaggaact gcccatctcc ccagaattcc aaaatgaagg tccatatgct ttaggtgtg
600
ctgggtcatgg tgggcttcac agtaggaaag ggtaagtggg gccaggggc agggaggag
660
gaaggggtaa ctgagtccag gaaggggggtg gagcgtggcc atggataatc gggcttccta
720
ctggcccagg gtatttgaga gtgaccagtc gcctccatcc ctcttctgct cccccagtt
780
cctgttcccc acatccggac gtgccacttc tgctcgtag aagacccttc ttaggatgc
840
atttcaggct cagagaagtg taccatcagc agctcatccc tgtgcatggt gatcaccatc
900
tattatgatg tcaaggttcg cttcatcggt cgaggctgtg gacagtacat ttctaccgc
960

```

tgccaagaaa aacgcaacac ctactttgca gagtactggt atcaggccca gtgctgtcag
 1020
 tacgattatt gcaactcctg gtcaagcccc caactccaga gctctctgcc ggagccccc
 1080
 gacaggcccc tggccctgcc tctgtctgac tcccagattc agtggttcta ccaggccctg
 1140
 aacctctccc tgcccctccc caatttccat gctgggacgg agcctgatgg cctggacccc
 1200
 atgggtcacac tgtccctgaa cctgggcttg tcttttgctg agctgcgccg catgtacttg
 1260
 ttccctcaata gttcaggact tttggttctt ccccaggctg gactcttgac acctcaccct
 1320
 tcctgaattc cacagtgcaa atatctttct gtaacaccct cagcatcctg cactgccctc
 1380
 tctgaaaaca cccacattct ttgggtcactg tgatttctta ggcctccgtc tgttgtacca
 1440
 ctagcatcta tatgactttt gtgtaatttt ctctcttgaa ctcgaggaggc tgagacggga
 1500
 gaatcgcttg aaccggggag gcgagggttg cagtgcgccg agatcgcgcc actgcactcc
 1560
 agcctgggtg acacagtgag actccgtctc caaaaaaag gatgaggaat agaat
 1615

<210> 3696

<211> 146

<212> PRT

<213> Homo sapiens

<400> 3696

Met	Val	Ile	Thr	Ile	Tyr	Tyr	Asp	Val	Lys	Val	Arg	Phe	Ile	Val	Arg
1				5				10						15	
Gly	Cys	Gly	Gln	Tyr	Ile	Ser	Tyr	Arg	Cys	Gln	Glu	Lys	Arg	Asn	Thr
			20					25					30		
Tyr	Phe	Ala	Glu	Tyr	Trp	Tyr	Gln	Ala	Gln	Cys	Cys	Gln	Tyr	Asp	Tyr
		35					40					45			
Cys	Asn	Ser	Trp	Ser	Ser	Pro	Gln	Leu	Gln	Ser	Ser	Leu	Pro	Glu	Pro
	50					55					60				
His	Asp	Arg	Pro	Leu	Ala	Leu	Pro	Leu	Ser	Asp	Ser	Gln	Ile	Gln	Trp
65				70						75				80	
Phe	Tyr	Gln	Ala	Leu	Asn	Leu	Ser	Leu	Pro	Leu	Pro	Asn	Phe	His	Ala
				85					90					95	
Gly	Thr	Glu	Pro	Asp	Gly	Leu	Asp	Pro	Met	Val	Thr	Leu	Ser	Leu	Asn
			100					105					110		
Leu	Gly	Leu	Ser	Phe	Ala	Glu	Leu	Arg	Arg	Met	Tyr	Leu	Phe	Leu	Asn
		115					120					125			
Ser	Ser	Gly	Leu	Leu	Val	Leu	Pro	Gln	Ala	Gly	Leu	Leu	Thr	Pro	His
	130						135					140			
Pro	Ser														
145															

<210> 3697

<211> 550

<212> DNA

<213> Homo sapiens

<400> 3697

ncggccgccc agttcgacgg gaggtggccc aggcaaatag tgatcatgat tggcctatgt
 60
 cgttatgggtg ggaggattga ctgctgctgg ggctgggctc gccagtcttg gggacagtgt
 120
 cagcctgtgt gcccaaccacg atgcaaacaat ggtgagtgtg tcggggccaaa caagtgaag
 180
 tgatcatcctg gttatgctgg aaaaacctgt aatcaagatc taaatgagtg tggcctgaag
 240
 ccccgccctt gtaagcacag gtgcatgaac acttacggca gctacaagtg ctactgtctc
 300
 aacggatata tgatcatgcc ggatgggttc tgatcaagtg cctgacctg ctccatggca
 360
 aactgtcagt atggctgtga tgttggttaa ggacaaatac ggtgccagtg cccatccct
 420
 ggctgcagc tggctcctga tgggaggacc tgtgtagatg ttgatgaatg tgctacagga
 480
 agagcctcct gccctaaatt taggcaatgt gtcaacactt ttgggagcta catctgaag
 540
 tgatcataaag
 550

<210> 3698

<211> 183

<212> PRT

<213> Homo sapiens

<400> 3698

Xaa	Ala	Ala	Glu	Phe	Asp	Gly	Arg	Trp	Pro	Arg	Gln	Ile	Val	Ser	Ser
1				5					10					15	
Ile	Gly	Leu	Cys	Arg	Tyr	Gly	Gly	Arg	Ile	Asp	Cys	Cys	Trp	Gly	Trp
			20					25					30		
Ala	Arg	Gln	Ser	Trp	Gly	Gln	Cys	Gln	Pro	Val	Cys	Gln	Pro	Arg	Cys
			35				40					45			
Lys	His	Gly	Glu	Cys	Ile	Gly	Pro	Asn	Lys	Cys	Lys	Cys	His	Pro	Gly
	50					55					60				
Tyr	Ala	Gly	Lys	Thr	Cys	Asn	Gln	Asp	Leu	Asn	Glu	Cys	Gly	Leu	Lys
65					70				75					80	
Pro	Arg	Pro	Cys	Lys	His	Arg	Cys	Met	Asn	Thr	Tyr	Gly	Ser	Tyr	Lys
				85				90						95	
Cys	Tyr	Cys	Leu	Asn	Gly	Tyr	Met	Leu	Met	Pro	Asp	Gly	Ser	Cys	Ser
			100				105						110		
Ser	Ala	Leu	Thr	Cys	Ser	Met	Ala	Asn	Cys	Gln	Tyr	Gly	Cys	Asp	Val
	115						120					125			
Val	Lys	Gly	Gln	Ile	Arg	Cys	Gln	Cys	Pro	Ser	Pro	Gly	Leu	Gln	Leu
	130				135						140				
Ala	Pro	Asp	Gly	Arg	Thr	Cys	Val	Asp	Val	Asp	Glu	Cys	Ala	Thr	Gly
145				150				155						160	
Arg	Ala	Ser	Cys	Pro	Lys	Phe	Arg	Gln	Cys	Val	Asn	Thr	Phe	Gly	Ser
				165				170						175	
Tyr	Ile	Cys	Lys	Cys	His	Lys									
			180												

<210> 3699
<211> 510
<212> DNA
<213> Homo sapiens

<400> 3699
naggagagag attgagaact atgagagaca gcagctaaga gacaaaggag gcgggagact
60
gcctaggtgc cgcagcaccc acaccgtcct cttgcccccc cgccactggg accccagagc
120
tggcccttga tggaggggag cgcacctcgc agcagcctga gcctggccag cagcgcctcc
180
accatctcct cgctcagcag cctgagcccc aagaagccca cccgggcagt aaacaaggtc
240
cacgcctttg ggaagagagg caatgcgctc aggagggatc ccaaccttcc cgtgcacatc
300
cgaggctggc ttcataagca ggacagctcg gggctccgtc tctggaaacg ccgctggttc
360
gtcctctccg gccattgcct cttttattac aaggacagcc gcgaggagag tgtcctaggc
420
agcgtcctgc tccccagcta caatattaga ccagatgggc cgggagcccc ccgagggcgg
480
cgcttcacct tcaccgcaga gcacccgggt
510

<210> 3700
<211> 127
<212> PRT
<213> Homo sapiens

<400> 3700
Met Glu Gly Ser Arg Pro Arg Ser Ser Leu Ser Leu Ala Ser Ser Ala
1 5 10 15
Ser Thr Ile Ser Ser Leu Ser Ser Leu Ser Pro Lys Lys Pro Thr Arg
20 25 30
Ala Val Asn Lys Val His Ala Phe Gly Lys Arg Gly Asn Ala Leu Arg
35 40 45
Arg Asp Pro Asn Leu Pro Val His Ile Arg Gly Trp Leu His Lys Gln
50 55 60
Asp Ser Ser Gly Leu Arg Leu Trp Lys Arg Arg Trp Phe Val Leu Ser
65 70 75 80
Gly His Cys Leu Phe Tyr Tyr Lys Asp Ser Arg Glu Glu Ser Val Leu
85 90 95
Gly Ser Val Leu Leu Pro Ser Tyr Asn Ile Arg Pro Asp Gly Pro Gly
100 105 110
Ala Pro Arg Gly Arg Arg Phe Thr Phe Thr Ala Glu His Pro Gly
115 120 125

<210> 3701
<211> 733
<212> DNA
<213> Homo sapiens

<400> 3701

ntgaattttc aaattacatt ctaggtttgc agcctctgga gcgtccagcg tcacattatt
 60
 attcactcag gagaaaaacc acacttggtg gacatctgtg gtcgaggggt tagtaacttc
 120
 agtaatttga aggagcacia aaagacacac acggctgata aagtcttcac ctgtgatgag
 180
 tgtggaaagt cttttaatat gcaaaggaag ttagtaaagc acagaattcg gcacacgggg
 240
 gagcggcctt acagctgctc tgcctgcggg aaatgttttg ggggatcagg tgacctccgc
 300
 aggcattgtc gcactcacac tggggagaag ccgtacacat gtgagatctg taacaagtgc
 360
 tttaccgct ctgcggtgct ccggcggcac aagaagatgc actgcaaagc tggtgacgag
 420
 agcccagatg tgctggagga gctcagccaa gccatcgaga cctccgacct cgagaaatct
 480
 cagagctcag actctttctc ccaagacacg tctgtgacgc tgatgccagt gtcgggttaa
 540
 ctccctgtcc acccagtgga aaattctgtg gcagaatttg atagccactc tggcggctcc
 600
 tattgtaagt tacggtecat gatccaacct catggagtta gtgaccagga gaagctgagt
 660
 ttggatcctg gtaaacttgc caagccccag attcatcata cacagcctca tgcctattct
 720
 tactctgatt ttg
 733

<210> 3702

<211> 236

<212> PRT

<213> Homo sapiens

<400> 3702

Val	Cys	Ser	Leu	Trp	Ser	Val	Gln	Arg	His	Ile	Ile	Ile	His	Ser	Gly	1	5	10	15
Glu	Lys	Pro	His	Leu	Cys	Asp	Ile	Cys	Gly	Arg	Gly	Phe	Ser	Asn	Phe	20	25	30	
Ser	Asn	Leu	Lys	Glu	His	Lys	Lys	Thr	His	Thr	Ala	Asp	Lys	Val	Phe	35	40	45	
Thr	Cys	Asp	Glu	Cys	Gly	Lys	Ser	Phe	Asn	Met	Gln	Arg	Lys	Leu	Val	50	55	60	
Lys	His	Arg	Ile	Arg	His	Thr	Gly	Glu	Arg	Pro	Tyr	Ser	Cys	Ser	Ala	65	70	75	80
Cys	Gly	Lys	Cys	Phe	Gly	Gly	Ser	Gly	Asp	Leu	Arg	Arg	His	Val	Arg	85	90	95	
Thr	His	Thr	Gly	Glu	Lys	Pro	Tyr	Thr	Cys	Glu	Ile	Cys	Asn	Lys	Cys	100	105	110	
Phe	Thr	Arg	Ser	Ala	Val	Leu	Arg	Arg	His	Lys	Lys	Met	His	Cys	Lys	115	120	125	
Ala	Gly	Asp	Glu	Ser	Pro	Asp	Val	Leu	Glu	Glu	Leu	Ser	Gln	Ala	Ile	130	135	140	
Glu	Thr	Ser	Asp	Leu	Glu	Lys	Ser	Gln	Ser	Ser	Asp	Ser	Phe	Ser	Gln	145	150	155	160
Asp	Thr	Ser	Val	Thr	Leu	Met	Pro	Val	Ser	Val	Lys	Leu	Pro	Val	His				

			165						170						175		
Pro	Val	Glu	Asn	Ser	Val	Ala	Glu	Phe	Asp	Ser	His	Ser	Gly	Gly	Ser		
			180						185						190		
Tyr	Cys	Lys	Leu	Arg	Ser	Met	Ile	Gln	Pro	His	Gly	Val	Ser	Asp	Gln		
			195						200						205		
Glu	Lys	Leu	Ser	Leu	Asp	Pro	Gly	Lys	Leu	Ala	Lys	Pro	Gln	Ile	His		
			210						215						220		
His	Thr	Gln	Pro	His	Ala	Tyr	Ser	Tyr	Ser	Asp	Phe						
225			230						235								

```
<210> 3703
<211> 3294
<212> DNA
<213> Homo sapiens
```

<400> 3703

60	nncggccgcc	gcgtccggct	gctggaccga	acttctgccg	tgccggacagc	aggagcagcg
120	ccgagcccca	ttccccacc	tctccagctc	gccctctgag	cctcccgagc	cctctctcca
180	tttcccacaa	ttgtgctgca	catggtgatg	agtttccggg	tgtctgagct	ccaggtgctt
240	cttggccttg	ctggccggaa	caagagtgga	cggaagcacg	agctcctggc	caaggctctg
300	cacctcctga	agtccagctg	tgcccctagt	gtccagatga	agatcaaaga	gctttaccga
360	cgacgctttc	cccggaagac	cctggggccc	tctgatctct	cccttctctc	tttgccccct
420	ggcacctctc	ctgtaggctc	ccctggctct	ctagctccca	ttccccaac	gctgttggcc
480	cctggcaccc	tgctggggcc	caagcgtgag	gtggacatgc	acccccctct	gccccagcct
540	gtgcaccctg	atgtcaccat	gaaaccattg	cccttctatg	aagtctatgg	ggagctcatc
600	cggcccacca	cccttgcatc	cacttctagc	cagcggtttg	aggaagcgca	ctttaccttt
660	gccctcacac	cccagcaagt	gcagcagatt	cttacatcca	gagaggttct	gccaggagcc
720	aaatgtgatt	ataccatata	ggtgcagcta	aggttctgtc	tctgtgagac	cagctgcccc
780	caggaagatt	attttcccc	caacctcttt	gtcaaggcca	atgggaaact	gtgccccctg
840	ccgggttacc	ttcccccaac	caagaatggg	gccgagccca	agaggcccag	ccgccccatc
900	aacatcacac	ccctggctcg	actctcagcc	actgttccca	acaccattgt	ggtcaattgg
960	tcatctgagt	tcggacggaa	ttactccttg	tctgtgtacc	tggtgaggga	gttgactgca
1020	ggaacccttc	tacaaaaaact	cagagcaaag	ggtatccgga	accagacca	ctcgcgggca
1080	ctgatcaagg	agaaattgac	tgctgaccct	gacagtgagg	tggccactac	aagtctccgg
1140	gtgtcactca	tgtgcccgc	aggggaagatg	cgcctgactg	tcccttgctg	tgccctcacc

tgcgcccacc tgcagagctt cgatgctgcc ctttatctac agatgaatga gaagaagcct
1200
acatggacat gtccctgtgtg tgacaagaag gctccctatg aatctcttat cattgatggt
1260
ttatttatgg agattcttag ttccctgttca gattgtgatg agatccaatt catggaagat
1320
ggatccctggg gcccaatgaa acccaagaag gaggcacatctg aggtttgccc cccgccaggg
1380
tatgggctgg atggcctcca gtacagccca gtccaggggg gagatccatc agagaataag
1440
aagaaggctcg aagttattga cttgacaata gaaagctcat cagatgagga ggatctgccc
1500
cctaccaaga agcactgttc tgtcacctca gctgccatcc cggccctacc tggaagcaaa
1560
ggagtccctga catctggcca ccagccatcc tcggtgctaa ggagccctgc tatgggcacg
1620
ttgggtgggg atttcctgtc cagtctccca ctacatgagt acccactgc cttccactg
1680
ggagccgaca tccaaggttt agatttatatt tcatttcttc agacagagag tcagcactat
1740
ggccctctg tcatcacctc actagatgaa caggatgccc ttggccactt cttccagtac
1800
cgagggaccc cttctcactt tctgggcca ctggcccca cgctggggag ctcccactgc
1860
agcgccactc cggcgcccc tccctggccgt gtcagcagca ttgtggcccc tgggggggccc
1920
ttgagggagg ggcatggagg acccctgccc tcaggctccct ctttgactgg ctgtcggtca
1980
gacatcattt ccctggactg agttccctgg attatggaaa cttcgctgtc cccaacact
2040
gagcaagtat gctgtggagt cccaaccca gctactctga tccctctggg ggctctggcc
2100
aagggccaga cagaccttca cagatgccta cttttggcct catctctgcc tgacaaggcc
2160
agcacccaaa gggttaatat ttaacctctt ttaaggaca ctggggctctg tttctggaaa
2220
tgttcttttag atggtggcac attcctttgg gtatgttaac ctaggcagtg ggaggcaaat
2280
gggatggtat gtgagctagg agaagggtg aaccctcagc cttgactatg tctagagcct
2340
cttggggaag gggcacctct cttgaacccc aaatgctctc tcttcttatt acccaaacc
2400
atggctctat ttcttcttca catccattgt ctcttcatgt ctattccatt cccttcggcc
2460
aaacagacag gtggaaaaac tgagacaggc agtttcagag atggacagag aactttattt
2520
tggtattgtg atgtggactt tttgtacat aaataagaaa aaccaaata ctccaaagat
2580
gacttccctt gcctcctact ccagtatgac agaggaggat gtaaggcctt agccatgatc
2640
tgcaggggtc tgggagtcag gcccgcccta ttgcttgggt ctctctctat ttatatatct
2700
aagttcacag tgtttcttat tccccctaa gcttctagag gctcatggcc ctgtagttag
2760

gcctggctca ttctgcacct ttccagggag gtggaaggac cctgtgccct ccttcccaat
 2820
 cttctttttc aggctcgcca aggcctagga cctatgttgt aattttactt tttatttcta
 2880
 aagttgtagt gaagctctca ccataataa aggttgtgaa tggtctgtga gtgtcatgga
 2940
 gatgggctag ggaggggatt ttacacttca ctttccagac ccctggtttg ggggaagagg
 3000
 gtccatgttc cattcttctt ttgctggccc tgggtccagg taagctgcac ttttacacgg
 3060
 tgggggtgtt ctgccagat gttgcagcca gagcttgagg gcaaacttgg ttccagtgtc
 3120
 gactctctct ttgtctctg ccatgggttg gatcatccgc aggaggggtg acatgtgcag
 3180
 gaccagaggt cgggctcttc catcctctc tagttccact gcaaggacag aggggtggtag
 3240
 gtctggggg agaagtcgg gtgtctctgt cccatcctct gcggcagcca ctgc
 3294

<210> 3704

<211> 619

<212> PRT

<213> Homo sapiens

<400> 3704

Met	Val	Met	Ser	Phe	Arg	Val	Ser	Glu	Leu	Gln	Val	Leu	Leu	Gly	Phe
1				5					10					15	
Ala	Gly	Arg	Asn	Lys	Ser	Gly	Arg	Lys	His	Glu	Leu	Leu	Ala	Lys	Ala
			20					25					30		
Leu	His	Leu	Leu	Lys	Ser	Ser	Cys	Ala	Pro	Ser	Val	Gln	Met	Lys	Ile
		35					40					45			
Lys	Glu	Leu	Tyr	Arg	Arg	Arg	Phe	Pro	Arg	Lys	Thr	Leu	Gly	Pro	Ser
	50				55						60				
Asp	Leu	Ser	Leu	Leu	Ser	Leu	Pro	Pro	Gly	Thr	Ser	Pro	Val	Gly	Ser
65					70					75				80	
Pro	Gly	Pro	Leu	Ala	Pro	Ile	Pro	Pro	Thr	Leu	Leu	Ala	Pro	Gly	Thr
			85						90					95	
Leu	Leu	Gly	Pro	Lys	Arg	Glu	Val	Asp	Met	His	Pro	Pro	Leu	Pro	Gln
			100					105					110		
Pro	Val	His	Pro	Asp	Val	Thr	Met	Lys	Pro	Leu	Pro	Phe	Tyr	Glu	Val
		115				120						125			
Tyr	Gly	Glu	Leu	Ile	Arg	Pro	Thr	Thr	Leu	Ala	Ser	Thr	Ser	Ser	Gln
	130				135						140				
Arg	Phe	Glu	Glu	Ala	His	Phe	Thr	Phe	Ala	Leu	Thr	Pro	Gln	Gln	Val
145					150					155				160	
Gln	Gln	Ile	Leu	Thr	Ser	Arg	Glu	Val	Leu	Pro	Gly	Ala	Lys	Cys	Asp
			165					170					175		
Tyr	Thr	Ile	Gln	Val	Gln	Leu	Arg	Phe	Cys	Leu	Cys	Glu	Thr	Ser	Cys
		180					185					190			
Pro	Gln	Glu	Asp	Tyr	Phe	Pro	Pro	Asn	Leu	Phe	Val	Lys	Val	Asn	Gly
	195					200						205			
Lys	Leu	Cys	Pro	Leu	Pro	Gly	Tyr	Leu	Pro	Pro	Thr	Lys	Asn	Gly	Ala
	210				215						220				
Glu	Pro	Lys	Arg	Pro	Ser	Arg	Pro	Ile	Asn	Ile	Thr	Pro	Leu	Ala	Arg

225					230					235				240	
Leu	Ser	Ala	Thr	Val	Pro	Asn	Thr	Ile	Val	Val	Asn	Trp	Ser	Ser	Glu
				245					250					255	
Phe	Gly	Arg	Asn	Tyr	Ser	Leu	Ser	Val	Tyr	Leu	Val	Arg	Gln	Leu	Thr
			260					265					270		
Ala	Gly	Thr	Leu	Leu	Gln	Lys	Leu	Arg	Ala	Lys	Gly	Ile	Arg	Asn	Pro
		275					280					285			
Asp	His	Ser	Arg	Ala	Leu	Ile	Lys	Glu	Lys	Leu	Thr	Ala	Asp	Pro	Asp
	290					295					300				
Ser	Glu	Val	Ala	Thr	Thr	Ser	Leu	Arg	Val	Ser	Leu	Met	Cys	Pro	Leu
305					310					315					320
Gly	Lys	Met	Arg	Leu	Thr	Val	Pro	Cys	Arg	Ala	Leu	Thr	Cys	Ala	His
			325					330					335		
Leu	Gln	Ser	Phe	Asp	Ala	Ala	Leu	Tyr	Leu	Gln	Met	Asn	Glu	Lys	Lys
		340					345					350			
Pro	Thr	Trp	Thr	Cys	Pro	Val	Cys	Asp	Lys	Lys	Ala	Pro	Tyr	Glu	Ser
	355					360						365			
Leu	Ile	Ile	Asp	Gly	Leu	Phe	Met	Glu	Ile	Leu	Ser	Ser	Cys	Ser	Asp
370					375					380					
Cys	Asp	Glu	Ile	Gln	Phe	Met	Glu	Asp	Gly	Ser	Trp	Cys	Pro	Met	Lys
385				390					395					400	
Pro	Lys	Lys	Glu	Ala	Ser	Glu	Val	Cys	Pro	Pro	Pro	Gly	Tyr	Gly	Leu
			405					410					415		
Asp	Gly	Leu	Gln	Tyr	Ser	Pro	Val	Gln	Gly	Gly	Asp	Pro	Ser	Glu	Asn
		420					425					430			
Lys	Lys	Lys	Val	Glu	Val	Ile	Asp	Leu	Thr	Ile	Glu	Ser	Ser	Ser	Asp
	435					440					445				
Glu	Glu	Asp	Leu	Pro	Pro	Thr	Lys	Lys	His	Cys	Ser	Val	Thr	Ser	Ala
450					455					460					
Ala	Ile	Pro	Ala	Leu	Pro	Gly	Ser	Lys	Gly	Val	Leu	Thr	Ser	Gly	His
465				470					475						480
Gln	Pro	Ser	Ser	Val	Leu	Arg	Ser	Pro	Ala	Met	Gly	Thr	Leu	Gly	Gly
			485					490					495		
Asp	Phe	Leu	Ser	Ser	Leu	Pro	Leu	His	Glu	Tyr	Pro	Pro	Ala	Phe	Pro
	500					505							510		
Leu	Gly	Ala	Asp	Ile	Gln	Gly	Leu	Asp	Leu	Phe	Ser	Phe	Leu	Gln	Thr
	515					520						525			
Glu	Ser	Gln	His	Tyr	Gly	Pro	Ser	Val	Ile	Thr	Ser	Leu	Asp	Glu	Gln
530					535						540				
Asp	Ala	Leu	Gly	His	Phe	Phe	Gln	Tyr	Arg	Gly	Thr	Pro	Ser	His	Phe
545				550					555						560
Leu	Gly	Pro	Leu	Ala	Pro	Thr	Leu	Gly	Ser	Ser	His	Cys	Ser	Ala	Thr
			565					570					575		
Pro	Ala	Pro	Pro	Pro	Gly	Arg	Val	Ser	Ser	Ile	Val	Ala	Pro	Gly	Gly
	580						585						590		
Ala	Leu	Arg	Glu	Gly	His	Gly	Gly	Pro	Leu	Pro	Ser	Gly	Pro	Ser	Leu
	595					600						605			
Thr	Gly	Cys	Arg	Ser	Asp	Ile	Ile	Ser	Leu	Asp					
610						615									

<210> 3705

<211> 1737

<212> DNA

<213> Homo sapiens

<400> 3705

ttttggaggg aaaggatgca ctttcatgtt taacaaaata aattaaatat acggggcttc
60
agctcaaaact ctacataaaa ttacagagat ctggggccac cacgacagtg ggggtgggggg
120
tgggtgtctgg cctggacggg gtgtggtcat cagcatggct gaaagaccag gcgggtcccg
180
ggccccagga gagaccacag tccctgcaac ccagtcttcc ttccatcatt attaataatta
240
tcttcatttc ttaaatataa ataccaaggc cccttctctg tgtcaggggg agaatgcagt
300
ggggatgagc cactagccat gggctccagc ctctcaggct tggggctgct gtgcccccaa
360
ccccagccca cagcagtagg ggactcctgg gcaccaagg caggtggcaa aaatagccgc
420
caaggccagg ggacagaggc ggggatggag gcggggactg aggcggggac agaggcgggc
480
agagttgggg gagtgacggg ggagcaggga aagtcctca tcaactatga gcctcacggc
540
acacgtactg caggcttcac ggcacaccct cccaaaagca cgtcagtctg cgtgtgtgnc
600
aggcagcata tctgcacctg tgtgtgcatg tgtgtccgga agtgtgtgcc caggcagcat
660
atctgcatgt gtgcgtgcgt gtgtatccgg acagcaatct gcacgtgtgt gcatgtccag
720
acagcatatc tgtgcacatg tgtgtgtcca ggcaatatct gcacgtgtgt gagtgttgag
780
gcagcattat ctgtgtgtgt gtccaggagc atatctgcgt gcgtgtgtgt gtcnnggaca
840
gcatatctgt gcatgcgtgt gtgtgtccgg acagcagtct gcgtgtgtgt gtgactagac
900
agcatatctg cgtgtgtcca ggcagcatat ctgcgcctgt gcacgtgtgt ctggaagtgt
960
gtgtccggca gcatatctgc atgtgtgtgc gtgtccnaga cagcatatct gtgcacgcgt
1020
gtgtgtgtgt gtgtccaggc anatatccgt gcatgtgtgt gtcaaggcag cattatctgt
1080
gtgtccagga gcatatctgt gcacgtgtgt gtccggatac atatctgcac gtgtgtggtc
1140
cagacagcat atccgtgtgt gtgtgtgtgt nccaggcagc acatctgcgc atgggtgtgc
1200
gtgnntgtat gttcaggcag catgtccttg tatgttctgg catgtctctg tgcgtgtgag
1260
tgcatattggg cagcttatct gtgtgccag gcggcatatc tgtgcatgtg cgtgtgtgag
1320
tacgtgtgcc ttncaggag cacgtgtgag cgcagtgtgt tgcatacatg catccaggta
1380
tgtgtgtgtc tgtgtgtgtg tgtccagggg ctatgcctca cacacagact gcctgggggtg
1440
ctggccattc ctctctgcca tgggtccctt gccttcgtct gcagctccgt cctccatcct
1500
cccagtctgc ctgtctggcc gggccccccg tgcccactgc agatacgggt ccgtctagca
1560

ctgatagtgg atgtgctggt ggaccttgcc ctccacgtgt gagtgtgtgt gagagtgtgt
 1620
 gtgtgtgtgt gtgtgtggat gtctgtgttag agtttggggg acaacttagg gccagcaact
 1680
 gggcctgggc ccaataagtg ctggggggggc tgccggagac ccatgtctct cacacag
 1737

<210> 3706

<211> 191

<212> PRT

<213> Homo sapiens

<400> 3706

Met	Gly	Ser	Ser	Leu	Ser	Gly	Leu	Gly	Leu	Leu	Cys	Pro	Gln	Pro	Gln
1				5					10					15	
Pro	Thr	Ala	Val	Gly	Asp	Ser	Trp	Ala	Pro	Lys	Ala	Gly	Gly	Lys	Asn
			20					25					30		
Ser	Arg	Gln	Gly	Gln	Gly	Thr	Glu	Ala	Gly	Met	Glu	Ala	Gly	Thr	Glu
		35					40					45			
Ala	Gly	Thr	Glu	Ala	Gly	Arg	Val	Gly	Gly	Val	Thr	Val	Glu	Gln	Gly
	50					55					60				
Lys	Ser	Leu	Ile	Asn	Tyr	Glu	Pro	His	Gly	Thr	Arg	Thr	Ala	Gly	Phe
65					70				75					80	
Thr	Ala	His	Pro	Pro	Lys	Ser	Thr	Ser	Val	Cys	Val	Cys	Xaa	Arg	Gln
				85					90					95	
His	Ile	Cys	Thr	Cys	Val	Cys	Met	Cys	Val	Arg	Lys	Cys	Val	Pro	Arg
			100					105					110		
Gln	His	Ile	Cys	Met	Cys	Ala	Cys	Val	Cys	Ile	Arg	Thr	Ala	Ile	Cys
		115					120					125			
Thr	Cys	Val	His	Val	Gln	Thr	Ala	Tyr	Leu	Cys	Thr	Cys	Val	Cys	Pro
	130					135					140				
Gly	Asn	Ile	Cys	Thr	Cys	Val	Ser	Val	Glu	Ala	Ala	Leu	Ser	Val	Cys
145					150					155				160	
Val	Ser	Arg	Ser	Ile	Ser	Ala	Cys	Val	Cys	Val	Ser	Xaa	Thr	Ala	Tyr
				165					170				175		
Leu	Cys	Met	Arg	Val	Cys	Val	Arg	Thr	Ala	Val	Cys	Val	Cys	Val	
			180					185					190		

<210> 3707

<211> 585

<212> DNA

<213> Homo sapiens

<400> 3707

ntctgccaaag ggatgatata tatgtgtcag atgttgagga cgacggtgat gacacatctc
 60
 tggatagtga cctggatcca gaggagctgg caggagtcag gggacatcag ggtctaaggg
 120
 accaaaagcg tatgcgactt actgaagtgc aagatgataa agaggaggta ggatttcacc
 180
 tggcttcaac atgtgctagc tatcaatgtg atacattata tacaacaaaa ggaaagaaca
 240
 aaaatatggg gcatttcatt ggatgctgaa aatgcatttg ataacattca acttcctac
 300

atgataaaaa ccctcaagaa actgggtata gaaggaatgt atctcaacgt aataaaagcc
 360
 gtatatgaca gaccancagt tagtatcatc ctgaatgggg aaaatctaca agaactacaa
 420
 acctttgggt taagatctgg aacacaacaa ggctgcccgc tttcaccaca gttactgaac
 480
 atagtactat aagtcctagc taggcgaatc agaggagaaa taaggggcat gcaaattggg
 540
 aaggaagaag tcaaattgtc cttatttaca gatgataaga tctta
 585

<210> 3708

<211> 106

<212> PRT

<213> Homo sapiens

<400> 3708

Asp	Phe	Thr	Trp	Leu	Gln	His	Val	Leu	Ala	Ile	Asn	Val	Ile	His	Tyr
1				5					10					15	
Ile	Gln	Gln	Lys	Glu	Arg	Thr	Lys	Ile	Trp	Gly	Ile	Ser	Leu	Asp	Ala
			20					25					30		
Glu	Asn	Ala	Phe	Asp	Asn	Ile	Gln	Leu	Pro	Tyr	Met	Ile	Lys	Thr	Leu
		35					40					45			
Lys	Lys	Leu	Gly	Ile	Glu	Gly	Met	Tyr	Leu	Asn	Val	Ile	Lys	Ala	Val
	50					55				60					
Tyr	Asp	Arg	Pro	Xaa	Val	Ser	Ile	Ile	Leu	Asn	Gly	Glu	Asn	Leu	Gln
65					70				75					80	
Glu	Leu	Gln	Thr	Phe	Gly	Leu	Arg	Ser	Gly	Thr	Gln	Gln	Gly	Cys	Pro
			85					90						95	
Leu	Ser	Pro	Gln	Leu	Leu	Asn	Ile	Val	Leu						
			100					105							

<210> 3709

<211> 3768

<212> DNA

<213> Homo sapiens

<400> 3709

nnaccggtcc cctaccccc tccgccttg cgcgcccggc ccgccgtgac ccacggccgc
 60
 ctccggagcc cgacgcgggc atatacttct cttgtcttg ttggatgcac aaatctgtgt
 120
 gcagtgtttt ttgccgttg cctagacgat cacttggttt ctctgaggat gtctggttct
 180
 cgtaaagagt ttgatgtgaa acagattttg aaaatcagat ggaggtgggt tggatcatcaa
 240
 gcatcatctc ctaattctac agttgacagc cagcaggag aattttggaa ccgaggacag
 300
 actggagcaa acggtgggag aaagttttta gatccatgta gcctacaatt gcctttggct
 360
 tcaattgggt accgaaggtc cagccaactg gattttcaga attcaccttc ttggccaatg
 420
 gcatccacct ctgaagtccc tgcatttgag ttacagcag aagattgtgg cgggtgcacat
 480

tggctggata gaccagaagt ggatgatggc actagtgaag aagaaaatga atctgattcc
540
agttcatgca ggacttccaa tagtagtcag acattatcat cctgtcatac tatggagcca
600
tgtacatcag atgaattttt ccaagccctt aatcatgccg agcaaacatt taaaaaatg
660
gaaaactatt tgagacataa acagtttgtt gatgtaattt tagtcgctgg tgatcgcaga
720
attccagctc acagattggg gctctcctct gtctcagact attttgctgc catgtttact
780
aatgatgtca gagaagcaag ataagaagac ataaaaatgg aagggtgtaga accaaattca
840
tcgtggctct tgatccaata tgcttataca ggccgccttg aattaaaaga agataatatt
900
gagtgcctgt tatctacagc ttgccttctt cagctttcac aggctgtaga agcatgttgt
960
aagtttttaa tgaaacagct tcatccatcc cacgtcttgg gaattctttc ttttgctgat
1020
gccaagggtt gtacagattt gcataaagtg gtcacaatt atactatgga gcatttcatg
1080
gaagtaatca gaaaccagga atttgtatta ttaccagcca gcgaaattgc aaagctcttg
1140
gctagtgtg acatgaacat tcctaattgag gagacaatat tgaatgcact tcttacttgg
1200
gtccgtcatg atttggaaca gagacggaaa gatctaagta aacttttggc ttatattagg
1260
ctacctcttc ttgcaccaca gttcctggca gacatggaaa ataatgtact ttttcgggat
1320
gatatagaat gtcagaaact cattatggaa gcaatgaagt accatttatt accagagaga
1380
cgacccatgt taaaagtcc tcggacaaaa cctaggaagt caactgttgg tacattattt
1440
gcagttgggg gaatggattc aacaaaagga gcaacaagca ttgaaaagta tgatctccgt
1500
acaaatatgt ggactccagt agcaaatatg aatgggagga ggctacagtt cgggtgtgca
1560
gtgctagatg acaaactgta tgtggttggg ggaagagatg gactgaagac tttgaatact
1620
gtagagtgtt acaaccccaa aacaaaaact tggagtgtga tgccacctat gtccacacat
1680
agacatggcc ttggtgtggc tgtactggaa ggtcccatgt atgccgtagg aggacatgat
1740
ggctggagct atctgaacac agtggaaaga tgggaccctc aggctcgcca gtggaatttt
1800
gttgccacta tgtctacccc taggagtaca gtaggtgtgg cagtactaag tggaaaactt
1860
tatgcagttg gtggtcgtga tggaaagttt tgtctcaaat cagtagaatg ttttgatcct
1920
catactaata agtggacact gtgtgcacag atgtcaaaaa ggagaggtgg cgtaggagtg
1980
acgacctgga atggactgct gtatgctata ggggggcacg atgctcccg atccaacttg
2040
acttccagac tctcagactg tgtggaaaga tatgatccca aacagacat gtggactgca
2100

gtagcatcca tgagcatcag cagagatgca gtgggggtct gtttacttgg tgataagtta
2160
tatgctgttg ggggggtatga tggacaggca taccttaata cctgggagge ttatgatccc
2220
cagacaaatg agtggaccca ggtattttca catacttttg aggacagcaa agatcacctg
2280
gtggccatca agcagaccat ctggaggcaa aactccttat ctgaggaatt cagaagtcac
2340
tagactgccc tattatctaa agccggcatc ttgtactagg cttctttacc aaaaatgtat
2400
ttaataaaaac atttccaacc tgtgaaaaaa aaaaaaaaaa attttttttt ttttgcttca
2460
aagagctttt ctgagagcag ggattttattt tcattacatg caacatggac aaacactgtt
2520
ctggtttttca tgacaatttg aattcaaagt aatatgtttt tctaaaattc agtgtattta
2580
tttggccata tggatgctcc ttgtgttctt ggtcacatat taaagaaact ggcactttgg
2640
ctgcaagaac aaataaaaaa tatcataaat ccaactggtc tttgatttgg gtctaggtta
2700
ataactaaag aaccattcag caataatggc ttgaaacatt tatatatacct atgaaaccgc
2760
aattagttaa gaggctgctg attctaataa ctatgacacc agcaaggagag tgaggggaga
2820
aatgttaact ctggatgcca aattcagagc aaagtatcta ttatctcctt ctcacttttg
2880
cagtatctat aaataaagtg gtggggggag aattatatga ataagttaa ataaaagtgc
2940
atacagaact gagaaatatt ttcattggaat ttgccactta gttcttaaaa ttcttataag
3000
gaaaataacc atttacaaca aaagactagt tacactgttg ctgttttagaa catgagagca
3060
aatgagtaa caatcaaatt ctctggttta aacttaatta tcttaaaaca tgttattctg
3120
taagttgaca tctatgcctt gaaaattcaa ggcagaaaagt aaaatcattt agaaagccag
3180
aaattccatc aatacatcta gacagatgtt tgcttgtagt ttttggatc caaaccttt
3240
tttccacaca tcgcacagat gccttttttg taggcacagc cctggcagta atgagaacct
3300
ggttggtgca cagaactttt acaaattcta caagtggaga acttattctt tccatatgga
3360
tcaaactctg ctttttttga agtcaaagct ttattttcat tcagctttct tccaccactt
3420
tctgtggtat tcttagcacc atctttccat gtatctggag tgataacagt accaagtttc
3480
ttttcacatt tttcgcacac catccttccc cacgacacct ttttcttccc gatctgaacc
3540
cctgttgact aatcttgctt ggggttgtgt aggtctgcag gaaggaaggc tgaaaaagcg
3600
gacgaagatt ttgacttaag tgggactttg tgatttaatt ttttcttttt ttttaagtggg
3660
gaggaagggg aagctagatg gactaggaga gacttgattt tgggtgctaaa gttccccagt
3720

tcatatgtga catcttttta aaaaaaaaaa aaaaaaaaaa aaaaaaaaa
3768

<210> 3710

<211> 70

<212> PRT

<213> Homo sapiens

<400> 3710

Met	Glu	Pro	Cys	Thr	Ser	Asp	Glu	Phe	Phe	Gln	Ala	Leu	Asn	His	Ala
1				5				10					15		
Glu	Gln	Thr	Phe	Lys	Lys	Met	Glu	Asn	Tyr	Leu	Arg	His	Lys	Gln	Leu
		20					25					30			
Cys	Asp	Val	Ile	Leu	Val	Ala	Gly	Asp	Arg	Arg	Ile	Pro	Ala	His	Arg
	35						40				45				
Leu	Val	Leu	Ser	Ser	Val	Ser	Asp	Tyr	Phe	Ala	Ala	Met	Phe	Thr	Asn
	50					55					60				
Asp	Val	Arg	Glu	Ala	Arg										
65					70										

<210> 3711

<211> 1366

<212> DNA

<213> Homo sapiens

<400> 3711

nctcactttt ctgacacgca ggcgatcggc cttgtggaga accagagtga ctggtacctg
60
ggcaacctct ggaagaacca caggccctgg cctgccttgg gccggggatt taacacaggc
120
gtgatcctgc tgcggctgga ccggctccgg caggctggct gggagcagat gtggaggctg
180
acagccaggc gggagctcct tagcctgcct gccgcctcac tggctgacca ggacatcttc
240
aacgctgtga tcaaggagca cccggggcta gtgcagcgtc tgccttgtgt ctggaatgtg
300
cagctgtcag atcacacact ggccgagcgc tgctactctg aggcgtctga cctcaaggctg
360
atccactgga actcaccaaa gaagcttcgg gtgaagaaca agcatgtgga attcttccgc
420
aatttctacc tgaccttcct ggagtacgat gggaaacctgc tgcggagaga gctctttgtg
480
tgccccagcc agccccacc tgggtgctgag cagttgcagc aggccctggc acaactggac
540
gaggaagacc cctgctttga gttccggcag cagcagctca ctgtgcaccg tgtgcatgtc
600
actttcctgc cccatgaacc gccaccccc cggcctcacg atgtcaccct tgtggcccag
660
ctgtccatgg accggctgca gatgttggaa gccctgtgca ggcaactggc tggccccatg
720
agcctggcct tgtacctgac agacgcggaa gctcagcagt tcctgcattt cgtcgaggcc
780
tcaccagtgc ttgctgcccg gcaggacgtg gcctaccatg tgggtgtaccg tgagggggccc
840

ctataccccg tcaaccagct tcgcaacgtg gccttgcccc aggcctcac gccttacgtc
 900
 ttccctcagt acattgactt cctgcctgcc tattctctct acgactacct cagggcctcc
 960
 attgagcagc tggggctggg cagccggcgc aaggcagcac tgggtggtgcc ggcatttgag
 1020
 accctgcgct accgcttcag cttcccccat tccaaggtgg agctgttggtg cttgctggat
 1080
 gcggggcactc tctacacctt caggtaggag aggtacttct tctgcccact ccactcactt
 1140
 gcccacactg gccccacta cccacgagct cctagcctca gcctggctcc caccgaccc
 1200
 tgctgcacag gtaccacgat gccccgaggc cagcaccca cagactatgc ccgctggcgg
 1260
 gagctcaggc cccgtaccgt gtgcaatggg cggccaacta tgaaccctac gtggtggtgc
 1320
 cacgagactg tccccgctat gatcctcgct ttgtgggctt cggtg
 1366

<210> 3712

<211> 368

<212> PRT

<213> Homo sapiens

<400> 3712

Xaa	His	Phe	Ser	Asp	Thr	Gln	Ala	Ile	Gly	Leu	Val	Glu	Asn	Gln	Ser
1			5						10				15		
Asp	Trp	Tyr	Leu	Gly	Asn	Leu	Trp	Lys	Asn	His	Arg	Pro	Trp	Pro	Ala
			20					25					30		
Leu	Gly	Arg	Gly	Phe	Asn	Thr	Gly	Val	Ile	Leu	Leu	Arg	Leu	Asp	Arg
			35				40					45			
Leu	Arg	Gln	Ala	Gly	Trp	Glu	Gln	Met	Trp	Arg	Leu	Thr	Ala	Arg	Arg
			50			55					60				
Glu	Leu	Leu	Ser	Leu	Pro	Ala	Ala	Ser	Leu	Ala	Asp	Gln	Asp	Ile	Phe
65					70					75				80	
Asn	Ala	Val	Ile	Lys	Glu	His	Pro	Gly	Leu	Val	Gln	Arg	Leu	Pro	Cys
				85					90					95	
Val	Trp	Asn	Val	Gln	Leu	Ser	Asp	His	Thr	Leu	Ala	Glu	Arg	Cys	Tyr
			100					105					110		
Ser	Glu	Ala	Ser	Asp	Leu	Lys	Val	Ile	His	Trp	Asn	Ser	Pro	Lys	Lys
			115				120					125			
Leu	Arg	Val	Lys	Asn	Lys	His	Val	Glu	Phe	Phe	Arg	Asn	Phe	Tyr	Leu
			130			135					140				
Thr	Phe	Leu	Glu	Tyr	Asp	Gly	Asn	Leu	Leu	Arg	Arg	Glu	Leu	Phe	Val
145				150						155				160	
Cys	Pro	Ser	Gln	Pro	Pro	Pro	Gly	Ala	Glu	Gln	Leu	Gln	Gln	Ala	Leu
			165						170					175	
Ala	Gln	Leu	Asp	Glu	Glu	Asp	Pro	Cys	Phe	Glu	Phe	Arg	Gln	Gln	Gln
			180				185					190			
Leu	Thr	Val	His	Arg	Val	His	Val	Thr	Phe	Leu	Pro	His	Glu	Pro	Pro
			195				200					205			
Pro	Pro	Arg	Pro	His	Asp	Val	Thr	Leu	Val	Ala	Gln	Leu	Ser	Met	Asp
			210			215					220				
Arg	Leu	Gln	Met	Leu	Glu	Ala	Leu	Cys	Arg	His	Trp	Pro	Gly	Pro	Met

225		230		235		240									
Ser	Leu	Ala	Leu	Tyr	Leu	Thr	Asp	Ala	Glu	Ala	Gln	Gln	Phe	Leu	His
			245						250					255	
Phe	Val	Glu	Ala	Ser	Pro	Val	Leu	Ala	Ala	Arg	Gln	Asp	Val	Ala	Tyr
			260					265					270		
His	Val	Val	Tyr	Arg	Glu	Gly	Pro	Leu	Tyr	Pro	Val	Asn	Gln	Leu	Arg
		275					280				285				
Asn	Val	Ala	Leu	Ala	Gln	Ala	Leu	Thr	Pro	Tyr	Val	Phe	Leu	Ser	Asp
	290					295				300					
Ile	Asp	Phe	Leu	Pro	Ala	Tyr	Ser	Leu	Tyr	Asp	Tyr	Leu	Arg	Ala	Ser
305					310					315				320	
Ile	Glu	Gln	Leu	Gly	Leu	Gly	Ser	Arg	Arg	Lys	Ala	Ala	Leu	Val	Val
			325					330					335		
Pro	Ala	Phe	Glu	Thr	Leu	Arg	Tyr	Arg	Phe	Ser	Phe	Pro	His	Ser	Lys
			340					345					350		
Val	Glu	Leu	Leu	Ala	Leu	Leu	Asp	Ala	Gly	Thr	Leu	Tyr	Thr	Phe	Arg
	355						360					365			

<210> 3713

<211> 1719

<212> DNA

<213> Homo sapiens

<400> 3713

```

ccatgggaag tagaacgccg gctcgcacatgc ctgcccgcgcc gccagcctgc cgggtacggc
60
cttttcgcgc ggggcttcca ggtcaaagaa ttcgcctttg ccgctaccgc tttcttaccc
120
tccgcacccg ttaagtcttc cggtcgggcg gcagtctctg aacacttagc cgcgccatcc
180
ggggtcacac cgcttgaag gaggtgacgg gggcggcgcg gggcgcggaac actccccgct
240
gagagtccgc ctgccatgga ctcggaatat tacagcggcg accagtcaga tgatgggtgg
300
gctacccag tacaggatga acgggattca gggtcagacg gtgaggatga tgtaaatgag
360
caacactccg gatcagacac tggaagtgtga gaacgtcatt cagagaatga aactagtgtg
420
cgagaagatg gcccccccaa aggacatcat gtgacagact ctgagaacga tgagccctta
480
aatcttaatg ctagtgactc tgaaagtgtg gagcttcaca ggcaaaagga cagcgactct
540
gaatctgagg aacgtgcaga gcctcctgca agcgattctg aaaatgagga tgtcaatcag
600
catgggagcg actctgagag tgaagagacc aggaaattac ctggtagtga ctctgaaaat
660
gaggaacttc ttaatgggca tgcaagtgtg tcagaaaacg aagatgttgg gaagcatccc
720
gccagtgtat ctgagattga ggagctccag aagagtctct ctagtgtactc tgaaacagaa
780
gatgctctaa aacctcaaat cagtgtactc gagagtgtgg aacccccaaag gcaccaagcc
840
agtgtactccg aaaatgagga gcctcccaaa cctcgaatga gtgattctga aagtgtggag
900

```

cttcctaaac ctcagggtcag tgattcagaa agtgaggaac cccaaggca ccaggccagt
 960
 gactctgaaa atgaggagct tcccaaacct cgtatcagtg actcagaaag tgaggaccct
 1020
 ccgaggcacc aggccagtga ctcagaaaat gaagagcttc ccaaaccctg aatcagtgat
 1080
 tcggaaagtg aggatcccc aaggaaccag gccagtgatt cggaaaatga ggagctaccc
 1140
 aaaccccgag tcagtgactc tgagagtga gggcctcaga aggggcctgc cagtgactca
 1200
 gaaactgagg atgcgtccag acacaaacag aagccagagt cagatgatga cagcgacagg
 1260
 gagaataagg gagaggatac agaaatgcag aatgactcct tccattcaga cagccatatg
 1320
 gacagaaaaa agtttcacag ttctgatagt gaggaggaag aacacaaaaa gcaaaaaatg
 1380
 gacagtgatg aagatgaaaa agaggggtgag gaggagaaag tagcgaagag aaaagctgct
 1440
 gtgctttctg atagtgaaga tgaagagaaa gcatcagcaa agaagagtcg tgttgtctct
 1500
 gatgcagatg actctgacag tgatgctgta tcagacaagt caggcaaaaag agagaagacc
 1560
 atagcatctg acagtgagga agaagctggg aaagaattgt ctgataagaa aaatgaagag
 1620
 aaggatctgt ttgggagtga cagtgagtca ggcaatgaag aagaaaatct tattgcagac
 1680
 atatttgag aatctggtga tgaagaggaa gaagaattc
 1719

<210> 3714

<211> 488

<212> PRT

<213> Homo sapiens

<400> 3714

Met	Asp	Ser	Glu	Tyr	Tyr	Ser	Gly	Asp	Gln	Ser	Asp	Asp	Gly	Gly	Ala
1				5					10					15	
Thr	Pro	Val	Gln	Asp	Glu	Arg	Asp	Ser	Gly	Ser	Asp	Gly	Glu	Asp	Asp
			20					25					30		
Val	Asn	Glu	Gln	His	Ser	Gly	Ser	Asp	Thr	Gly	Ser	Val	Glu	Arg	His
		35				40					45				
Ser	Glu	Asn	Glu	Thr	Ser	Asp	Arg	Glu	Asp	Gly	Pro	Pro	Lys	Gly	His
	50					55					60				
His	Val	Thr	Asp	Ser	Glu	Asn	Asp	Glu	Pro	Leu	Asn	Leu	Asn	Ala	Ser
65					70					75					80
Asp	Ser	Glu	Ser	Glu	Glu	Leu	His	Arg	Gln	Lys	Asp	Ser	Asp	Ser	Glu
			85						90					95	
Ser	Glu	Glu	Arg	Ala	Glu	Pro	Pro	Ala	Ser	Asp	Ser	Glu	Asn	Glu	Asp
			100					105					110		
Val	Asn	Gln	His	Gly	Ser	Asp	Ser	Glu	Ser	Glu	Glu	Thr	Arg	Lys	Leu
		115					120					125			
Pro	Gly	Ser	Asp	Ser	Glu	Asn	Glu	Glu	Leu	Leu	Asn	Gly	His	Ala	Ser
	130					135					140				
Asp	Ser	Glu	Asn	Glu	Asp	Val	Gly	Lys	His	Pro	Ala	Ser	Asp	Ser	Glu

```

145             150             155             160
Ile Glu Glu Leu Gln Lys Ser Pro Ala Ser Asp Ser Glu Thr Glu Asp
             165             170             175
Ala Leu Lys Pro Gln Ile Ser Asp Ser Glu Ser Glu Glu Pro Pro Arg
             180             185             190
His Gln Ala Ser Asp Ser Glu Asn Glu Glu Pro Pro Lys Pro Arg Met
             195             200             205
Ser Asp Ser Glu Ser Glu Glu Leu Pro Lys Pro Gln Val Ser Asp Ser
             210             215             220
Glu Ser Glu Glu Pro Pro Arg His Gln Ala Ser Asp Ser Glu Asn Glu
225             230             235             240
Glu Leu Pro Lys Pro Arg Ile Ser Asp Ser Glu Ser Glu Asp Pro Pro
             245             250             255
Arg His Gln Ala Ser Asp Ser Glu Asn Glu Glu Leu Pro Lys Pro Arg
             260             265             270
Ile Ser Asp Ser Glu Ser Glu Asp Pro Pro Arg Asn Gln Ala Ser Asp
             275             280             285
Ser Glu Asn Glu Glu Leu Pro Lys Pro Arg Val Ser Asp Ser Glu Ser
             290             295             300
Glu Gly Pro Gln Lys Gly Pro Ala Ser Asp Ser Glu Thr Glu Asp Ala
305             310             315             320
Ser Arg His Lys Gln Lys Pro Glu Ser Asp Asp Asp Ser Asp Arg Glu
             325             330             335
Asn Lys Gly Glu Asp Thr Glu Met Gln Asn Asp Ser Phe His Ser Asp
             340             345             350
Ser His Met Asp Arg Lys Lys Phe His Ser Ser Asp Ser Glu Glu Glu
             355             360             365
Glu His Lys Lys Gln Lys Met Asp Ser Asp Glu Asp Glu Lys Glu Gly
370             375             380
Glu Glu Glu Lys Val Ala Lys Arg Lys Ala Ala Val Leu Ser Asp Ser
385             390             395             400
Glu Asp Glu Glu Lys Ala Ser Ala Lys Lys Ser Arg Val Val Ser Asp
             405             410             415
Ala Asp Asp Ser Asp Ser Asp Ala Val Ser Asp Lys Ser Gly Lys Arg
             420             425             430
Glu Lys Thr Ile Ala Ser Asp Ser Glu Glu Glu Ala Gly Lys Glu Leu
             435             440             445
Ser Asp Lys Lys Asn Glu Glu Lys Asp Leu Phe Gly Ser Asp Ser Glu
450             455             460
Ser Gly Asn Glu Glu Glu Asn Leu Ile Ala Asp Ile Phe Gly Glu Ser
465             470             475             480
Gly Asp Glu Glu Glu Glu Phe
             485

```

<210> 3715

<211> 288

<212> DNA

<213> Homo sapiens

<400> 3715

```

ngccgcgggcg cgggccccgc ggggggttaga gggtcaccatg ctgaggggtcg cgtaaaggac
60
accacatccc tggaggctcg aattattgcc ttgtctggca agatccgcag ttatgaagaa
120

```

cacttggaga aacatcgaaa ggacaaagcc cacaaacgct atctgctaata gagcattgac
 180
 cagaggaaaa agatgctcaa aaacctccgt aacaccaact atgatgtctt tgagaagata
 240
 tgctgggggc tgggaattga gtacaccttc cccctctgtg attacccg
 288

<210> 3716
 <211> 96
 <212> PRT
 <213> Homo sapiens

<400> 3716
 Xaa Arg Gly Ala Gly Pro Ala Gly Val Arg Gly His His Ala Glu Gly
 1 5 10 15
 Arg Val Lys Asp Thr Thr Ser Leu Glu Ala Arg Ile Ile Ala Leu Ser
 20 25 30
 Gly Lys Ile Arg Ser Tyr Glu Glu His Leu Glu Lys His Arg Lys Asp
 35 40 45
 Lys Ala His Lys Arg Tyr Leu Leu Met Ser Ile Asp Gln Arg Lys Lys
 50 55 60
 Met Leu Lys Asn Leu Arg Asn Thr Asn Tyr Asp Val Phe Glu Lys Ile
 65 70 75 80
 Cys Trp Gly Leu Gly Ile Glu Tyr Thr Phe Pro Pro Leu Tyr Tyr Arg
 85 90 95

<210> 3717
 <211> 1545
 <212> DNA
 <213> Homo sapiens

<400> 3717
 ntgatcagga cagatgtgtc attattatgt gagagtgtgc atttacaagg gaaatgatta
 60
 tttcggccca taaattatgt taaaagctat ttattcgctt atgaacattt ttagagggga
 120
 taacatgggc cctcacaaca tcccaggag acaaaaacat agcagattta ataattctaat
 180
 ttagcaagat aaaagtgtgg atttttgtga aagggtacaca ttttctttaa caagtaaaag
 240
 tttcagatca ttattgatat ttacttattt taaagtaaag gcattacaca ctcaacattt
 300
 ggctgatct gattttttaa cttcatccct aggattgata ttgctgatga tattattaat
 360
 gccagtgaat gtaacagaga ctgttcaaaa cctgtggcta gcactaattt agacaatgaa
 420
 gctatgcagc aagattgtgt atttgagaat gaagaaaata ccagtcctgt aggtatatgt
 480
 ttagagccat gcagtgaccg tggatgatgt gaagatggct gtcttgagag ggaagaatat
 540
 ttgttatttg acagtgataa attgtcacac ttgattctgg attctagtag caagatatgt
 600
 gatttgaatg ccaacactga atcagaagta ccaggagggtc agagtgttgg tgttcaaggg
 660

gaagcagcgt gtgtcagtat tccacattta gatctgaaga atgtttctga tggtgataaa
 720
 tgggaagagc catttcctgc ttttaagtct tggcaggagg actctgagtc tggagaagct
 780
 cagctgtctc cacaagctgg aagaatgaat catcacccct tggaagagga ctgtcctcca
 840
 gtattatcac accgcagttt agattttgggt caaagccagc gtttcctaca tgatccagaa
 900
 aagttggatt cctcatctaa agcactgtct tttactagaa ttcgaagatc atcctttagt
 960
 tcaaaagatg aaaagagaga ggacagaaca ccttatcagc tggtaagaa acttcagaag
 1020
 aaaatcagac aatttgagga acagtttgaa agggaaagaa atagcaagcc ctccacagt
 1080
 gatattgctg ccaatccaaa ggtattaaaa tggatgacag agcttacaaa actgcggaag
 1140
 caaattaaag atgcaaaaaca caaaaattct gatggagaat ttgtacctca gacacgtcca
 1200
 cgtagtaaca cacttccaaa aagctttggc tcttctctag accatgaaga tgaagagaat
 1260
 gaagatgaac ccaaggtcat tcagaaggag aaaaaacat ctaaagaagc aacccttgaa
 1320
 cttattctta aaagactgaa agaaaaacgt attgagaggt gtcttccaga agatatcaag
 1380
 aaaatgacca aagatcattt ggtagaagag aaagcttctc ttcagaaaag tcttctttac
 1440
 tatgaaagtc aacatggaag gccggtgacc aaggaagaaa ggcacattgt taaacctctc
 1500
 tatgatagat acaggcttgt aaaacaaatg ctgacaagag ctagc
 1545

<210> 3718

<211> 374

<212> PRT

<213> Homo sapiens

<400> 3718

Met	Gln	Gln	Asp	Cys	Val	Phe	Glu	Asn	Glu	Glu	Asn	Thr	Gln	Ser	Val
1				5					10					15	
Gly	Ile	Leu	Leu	Glu	Pro	Cys	Ser	Asp	Arg	Gly	Asp	Ser	Glu	Asp	Gly
			20					25					30		
Cys	Leu	Glu	Arg	Glu	Glu	Tyr	Leu	Leu	Phe	Asp	Ser	Asp	Lys	Leu	Ser
			35				40					45			
His	Leu	Ile	Leu	Asp	Ser	Ser	Ser	Lys	Ile	Cys	Asp	Leu	Asn	Ala	Asn
	50				55					60					
Thr	Glu	Ser	Glu	Val	Pro	Gly	Gly	Gln	Ser	Val	Gly	Val	Gln	Gly	Glu
65					70				75					80	
Ala	Ala	Cys	Val	Ser	Ile	Pro	His	Leu	Asp	Leu	Lys	Asn	Val	Ser	Asp
			85					90					95		
Gly	Asp	Lys	Trp	Glu	Glu	Pro	Phe	Pro	Ala	Phe	Lys	Ser	Trp	Gln	Glu
			100					105					110		
Asp	Ser	Glu	Ser	Gly	Glu	Ala	Gln	Leu	Ser	Pro	Gln	Ala	Gly	Arg	Met
		115					120					125			
Asn	His	His	Pro	Leu	Glu	Glu	Asp	Cys	Pro	Pro	Val	Leu	Ser	His	Arg

130		135		140											
Ser	Leu	Asp	Phe	Gly	Gln	Ser	Gln	Arg	Phe	Leu	His	Asp	Pro	Glu	Lys
145					150					155					160
Leu	Asp	Ser	Ser	Ser	Lys	Ala	Leu	Ser	Phe	Thr	Arg	Ile	Arg	Arg	Ser
				165						170					175
Ser	Phe	Ser	Ser	Lys	Asp	Glu	Lys	Arg	Glu	Asp	Arg	Thr	Pro	Tyr	Gln
				180						185				190	
Leu	Val	Lys	Lys	Leu	Gln	Lys	Lys	Ile	Arg	Gln	Phe	Glu	Glu	Gln	Phe
		195						200				205			
Glu	Arg	Glu	Arg	Asn	Ser	Lys	Pro	Ser	Tyr	Ser	Asp	Ile	Ala	Ala	Asn
		210						215				220			
Pro	Lys	Val	Leu	Lys	Trp	Met	Thr	Glu	Leu	Thr	Lys	Leu	Arg	Lys	Gln
225					230						235				240
Ile	Lys	Asp	Ala	Lys	His	Lys	Asn	Ser	Asp	Gly	Glu	Phe	Val	Pro	Gln
				245						250				255	
Thr	Arg	Pro	Arg	Ser	Asn	Thr	Leu	Pro	Lys	Ser	Phe	Gly	Ser	Ser	Leu
			260						265					270	
Asp	His	Glu	Asp	Glu	Glu	Asn	Glu	Asp	Glu	Pro	Lys	Val	Ile	Gln	Lys
		275						280					285		
Glu	Lys	Lys	Pro	Ser	Lys	Glu	Ala	Thr	Leu	Glu	Leu	Ile	Leu	Lys	Arg
		290						295				300			
Leu	Lys	Glu	Lys	Arg	Ile	Glu	Arg	Cys	Leu	Pro	Glu	Asp	Ile	Lys	Lys
305					310					315					320
Met	Thr	Lys	Asp	His	Leu	Val	Glu	Glu	Lys	Ala	Ser	Leu	Gln	Lys	Ser
			325						330					335	
Leu	Leu	Tyr	Tyr	Glu	Ser	Gln	His	Gly	Arg	Pro	Val	Thr	Lys	Glu	Glu
		340						345					350		
Arg	His	Ile	Val	Lys	Pro	Leu	Tyr	Asp	Arg	Tyr	Arg	Leu	Val	Lys	Gln
		355						360					365		
Met	Leu	Thr	Arg	Ala	Ser										
		370													

<210> 3719

<211> 422

<212> DNA

<213> Homo sapiens

<400> 3719

```

nnncatctgc gctgagtggg agtataataa aatacctcnn cactggggac tgggatggga
60
ttttgggctt ggctgctccg tggtttgatc ttctgcgggt tgctggggtc ctacatgggt
120
gggcaaccag aaccccggtg gggaaagaat aacaaaaaaa agtttgagtg caacagtaga
180
cagcccggtt gcaaaaatgt gtgttttgat gacttcttcc ccatttccca agtcagactt
240
tgggccttac aactgataat ggtctccaca ccttcacttc tgggtggtttt acatgtagcc
300
tatcatgagg gtagagagaa aaggcacaga aagaaactct atgtcagccc aggtacaatg
360
gatggggggc tatggtacgc ttatcttata agcctcattg ttaaaactgg ttttgaaacn
420
nn
422

```


<210> 3720
 <211> 122
 <212> PRT
 <213> Homo sapiens

<400> 3720
 Met Gly Phe Trp Ala Trp Leu Leu Arg Gly Leu Ile Phe Arg Gly Leu
 1 5 10 15
 Pro Gly Ser Tyr Met Gly Gly Gln Pro Glu Pro Arg Val Gly Lys Asn
 20 25 30
 Asn Gln Lys Lys Phe Glu Cys Asn Ser Arg Gln Pro Gly Cys Lys Asn
 35 40 45
 Val Cys Phe Asp Asp Phe Phe Pro Ile Ser Gln Val Arg Leu Trp Ala
 50 55 60
 Leu Gln Leu Ile Met Val Ser Thr Pro Ser Leu Leu Val Val Leu His
 65 70 75 80
 Val Ala Tyr His Glu Gly Arg Glu Lys Arg His Arg Lys Lys Leu Tyr
 85 90 95
 Val Ser Pro Gly Thr Met Asp Gly Gly Leu Trp Tyr Ala Tyr Leu Ile
 100 105 110
 Ser Leu Ile Val Lys Thr Gly Phe Glu Thr
 115 120

<210> 3721
 <211> 4728
 <212> DNA
 <213> Homo sapiens

<400> 3721
 agcgagaagg agaaggaaga gttggagcgg ctgcagaaag aggaggagga gaggaagaag
 60
 aggtctgcagc tgtatgtgtt cgtgatgcgc tgcctgcctt acccctttta tgccaagcag
 120
 cccaccgaca tggctcgccg gcagcagaag atcagcaaac agcagctgca gacagtcaag
 180
 gaccgggtttc aggctttcct caatggggaa acccagatca tggctgacga agccttcatg
 240
 aacgctgtgc agagttacta tgaggtgttc ctgaagagcg accgtgtggc ccgcatgggt
 300
 cagagtggag gctgttcgc caacgactcc cgggaggtct tcaagaagca cattgagaag
 360
 agagtgcgca gcctgcctga gattgacggc ctcagcaagg agactgtgct gagctcctgg
 420
 atggccaaat ttgatgcat ctaccgtgga gaagaggacc cgcggaagca gcaggcccgg
 480
 atgacagcca gcgcagcctc cgagctgatt ctgagcaagg agcaactcta tgagatgttc
 540
 cagaacattc ttgggatcaa gaagttcgaa catcagctcc ttacaatgc ctgccagctg
 600
 gacaatccag atgagcaagc agcccagatc agacgagagc tggatggacg tctacaaatg
 660
 gcagaccaa tagccaggga acgcaaattt cccaagtttg tatccaaaga aatggaaaac
 720

atgtacattg aggagctgaa gtcattctgtc aacctgctca tggccaactt ggagagcatg
780
ccggtatcca aaggcgggga gttcaagctc cagaaactca aacgcagcca caatgcttcc
840
atcatcgaca tgggcgagga gaggagaaac cagctctcca agtcagatgt cgtgctgtct
900
ttctcattgg aggtggtaat tatggaagtc caaggcctca aatctttggc tccaaatcgc
960
atcgtatatatt gcacaatgga ggtggaagga ggagagaaac tacagactga tcaggccgag
1020
gcttctaaac caacctgggg caccaggggt gacttctcca caacccatgc actgccagct
1080
gtgaagggtga agctgttcac agagagcaca ggcgtcctgg cgttgaggga caaggagctt
1140
gggcgggtta ttctccatcc caccggaac agcccaaac agtcagagtg gcacaaaatg
1200
acagtctcca aaaactgccc caaccaagat ctcaaaatca aacttgctgt ccgaatggat
1260
aagcctcaaa acatgaagca ttctgggtat ttatgggcca tcggtaagaa tgtctggaag
1320
agatggaaga aaagggtttt tgtattggtg caggtcagtc agtacacgtt tgccatgtgc
1380
agttatcggg agaagaaagc ggagcctcag gaacttctac aattggatgg ctacactgtg
1440
gattacaccg acccccagcc aggtttggag ggtggccgag ccttcttcaa tgctgtcaag
1500
gaggagaca ccgtgatatt tgccagtgc gatgaacaag accgcacct gtgggtccag
1560
gccatgtatc gggccacggg gcagtcacac aagcctgtgc ccccgaccca agtccagaaa
1620
ctcaacgcca agggaggaaa tgtacctcag ctggatgcc ctatctctca atttctgga
1680
ctgaaggacg cagatagagc tcaaaaacat ggcattgatg aatttatctc ttccaacccc
1740
tgtaactttg accacgcttc cctctttgag atggtacaac gccttacttt ggatcacaga
1800
cttaatgatt cctattcttg cctgggctgg ttcagtcctg gccagggtgtt tgtactagac
1860
gagtattgag cccgaaatgg agtccggggg tgtcaccgac atctctgcta cctcagagac
1920
ttgcttgaac gggcagaaaa tggcgccatg atcgaccca ccttcttca ctacagcttt
1980
gccttctgtg catcccatgt ccatgggaac aggcctgatg gaattggaac tgtgactgtt
2040
gaagaaaagg aacgttttga agaaatcaaa gagaggctcc gagttctgct agaaaatcag
2100
attacacatt ttaggtattg ctttccattt ggtcgacctg aagggtgcttt gaaagctact
2160
ctctcactct tggaaagggg tttgatgaaa gatattgtta cccagtgcc acaagaggag
2220
gtaaaaacag ttatccgtaa atgtctggaa caggctgcgt tagtcaacta ttctcggtc
2280
tcagagtatg ccaaaatcga agagaatcaa aaggatgcag aaaatgtagg ccggttaatc
2340

actcctgcc aaaaagcttga agatacaata cgtcttgctg aactagtcac tgaagttctt
2400
cagcaaaatg aggagcacca cgcagagcca catgttgata aaggagaggc ctttgctggtg
2460
tggtcagatt taatggtgga gcatgaggag acgttcctgt cactctttgc agtagacatg
2520
gatgcagcct tagagggtgca acctccagac acatgggaca gttttccact atttcagctg
2580
ctgaatgatt ttctccgtac tgactataat ttgtgcaatg gaaaatttca caaacacctg
2640
caagacctgt ttgccccact tgttggttaga tatgtggatc tgatggagtc ctcaattgca
2700
caatccattc acaggggctt tgagcgggag tcatgggaac cagtcaataa tgggtcaggc
2760
acctcagaag atctgttttg gaaacttgac gcccttcaga ctttcattcg ggacctgcac
2820
tggcctgaag aagagtttgg aaagcacctg gaacaacggc tgaagttgat ggcaagtgc
2880
atgatcgaat cttgtgtcaa aagaaccagg attgcatttg aagttaagct gcaaaaaacc
2940
agtcgatcaa cagattttcg agtcccacag tcaatatgca ccatgtttaa tgttatgggt
3000
gatgccaaag ctcaatcaac aaaactttgc agcatggaaa tgggccaaga gtttgctaaa
3060
atgtggcatc aataccattc aaaaatagac gaactaattg aagaaactgt taaagaaatg
3120
ataacactct tgggtgcaaa gttcgttact atcttggaag gagtgctggc aaaattatcc
3180
agatatgacg aagggaactt gttttcttct tttctgtcat ttaccgtgaa ggcagcttcc
3240
aaatatgtgg atgtacctaa acccgggatg gacgtggccg acgcctacgt gactttcgtc
3300
cgccattctc aggatgtcct gcgtgataag gtcaatgagg agatgtacat agaaagggtta
3360
tttgatcaat ggtacaacag ctccatgaac gtgatctgca cctgggtgac ggaccggatg
3420
gacttacagc ttcataatga tcagttgaaa acactaatta ggatggtaaa gaaaacctac
3480
agagatttcc gattgcaagg ggtcctggac tccaccttaa acagcaagac ctatgaaacg
3540
atccggaacc gtctcactgt ggaggaagcc acagcatcag tgagtgaagg tgggggactg
3600
cagggcatca gcatgaagga cagcgatgag gaagacgaag aagacgatta gaccatttgg
3660
tcctagagtc tgctgggaca gagtcctgta atcagtgcat gtccttagtc tgttagtta
3720
accattagg aattttctgt caactaccat gcccatgaga tgtttatcaa tacaactgcc
3780
atttttagcta tgtggtacca agattagcaa atgaccttca tatccactga tttcctgatg
3840
tccatgtcta tatgtttaca agcaatatgg agcaccattc tttaaatact gttcatggag
3900
aatacatagt ctaaccacta ggcgtgtccc tgttatcagc aaagatcaat gatgcttcat
3960

tcatgtacta tgtatgcatt ggtggtaa at ggatgtgagg gcaagtacat caagtacatt
 4020
 cactctgttt cacgtatgtg gatgccagtt aattaaatga gtacgtaaat aaattaatta
 4080
 aaacacatag atctgctttg tgtttttatt tttatttttt gaaaaacaaa aggcaagtct
 4140
 ccaacaatta acttttgatg ctttctgttc ccctaaaacc aaaaaatgaa ccccttgtgt
 4200
 cgttgttaac ccctcctttc atttactcat ataattagcc aaaaaaaaaa ggatggctac
 4260
 ataccaatgg attgattctc ttaattgcc aegcaagggg gcgatcctat catgacttaa
 4320
 catcaagcgc gcagttcaaa actactgtct tctgtcaaag ttttctctc ttaaagtta
 4380
 ttttgccttt acgtctcaac tgtgtatgta aaaaaaacga atatttaa atacaacct
 4440
 gactaaaaat gtgtttataa taagatgtgg atatttcctt cagtagattg taaccataat
 4500
 ttaaattatt ttgttccaca ctgtttttta tatctgtcat gtacattgca tttgatctg
 4560
 taactgcaca accctggggg ttgctgcaga gctatttctt tccatgtaaa gtagtggatc
 4620
 catcttgctt ttgccttata taaagcctac agttatggaa gtgtggaaaa ctgtggcttc
 4680
 tcaataaata ttcagatgtc ctaagaataa aaaaaaaaaa aaaaaaaaaa
 4728

<210> 3722

<211> 1216

<212> PRT

<213> Homo sapiens

<400> 3722

Ser	Glu	Lys	Glu	Lys	Glu	Glu	Leu	Glu	Arg	Leu	Gln	Lys	Glu	Glu	Glu	1	5	10	15
Glu	Arg	Lys	Lys	Arg	Leu	Gln	Leu	Tyr	Val	Phe	Val	Met	Arg	Cys	Ile	20	25	30	
Ala	Tyr	Pro	Phe	Asn	Ala	Lys	Gln	Pro	Thr	Asp	Met	Ala	Arg	Arg	Gln	35	40	45	
Gln	Lys	Ile	Ser	Lys	Gln	Gln	Leu	Gln	Thr	Val	Lys	Asp	Arg	Phe	Gln	50	55	60	
Ala	Phe	Leu	Asn	Gly	Glu	Thr	Gln	Ile	Met	Ala	Asp	Glu	Ala	Phe	Met	65	70	75	80
Asn	Ala	Val	Gln	Ser	Tyr	Tyr	Glu	Val	Phe	Leu	Lys	Ser	Asp	Arg	Val	85	90	95	
Ala	Arg	Met	Val	Gln	Ser	Gly	Gly	Cys	Ser	Ala	Asn	Asp	Ser	Arg	Glu	100	105	110	
Val	Phe	Lys	Lys	His	Ile	Glu	Lys	Arg	Val	Arg	Ser	Leu	Pro	Glu	Ile	115	120	125	
Asp	Gly	Leu	Ser	Lys	Glu	Thr	Val	Leu	Ser	Ser	Trp	Met	Ala	Lys	Phe	130	135	140	
Asp	Ala	Ile	Tyr	Arg	Gly	Glu	Glu	Asp	Pro	Arg	Lys	Gln	Gln	Ala	Arg	145	150	155	160
Met	Thr	Ala	Ser	Ala	Ala	Ser	Glu	Leu	Ile	Leu	Ser	Lys	Glu	Gln	Leu				

2871

1

1025 1030 1035 1040
 Ile Thr Leu Leu Val Ala Lys Phe Val Thr Ile Leu Glu Gly Val Leu
 1045 1050 1055
 Ala Lys Leu Ser Arg Tyr Asp Glu Gly Thr Leu Phe Ser Ser Phe Leu
 1060 1065 1070
 Ser Phe Thr Val Lys Ala Ala Ser Lys Tyr Val Asp Val Pro Lys Pro
 1075 1080 1085
 Gly Met Asp Val Ala Asp Ala Tyr Val Thr Phe Val Arg His Ser Gln
 1090 1095 1100
 Asp Val Leu Arg Asp Lys Val Asn Glu Glu Met Tyr Ile Glu Arg Leu
 1105 1110 1115 1120
 Phe Asp Gln Trp Tyr Asn Ser Ser Met Asn Val Ile Cys Thr Trp Leu
 1125 1130 1135
 Thr Asp Arg Met Asp Leu Gln Leu His Ile Tyr Gln Leu Lys Thr Leu
 1140 1145 1150
 Ile Arg Met Val Lys Lys Thr Tyr Arg Asp Phe Arg Leu Gln Gly Val
 1155 1160 1165
 Leu Asp Ser Thr Leu Asn Ser Lys Thr Tyr Glu Thr Ile Arg Asn Arg
 1170 1175 1180
 Leu Thr Val Glu Glu Ala Thr Ala Ser Val Ser Glu Gly Gly Gly Leu
 1185 1190 1195 1200
 Gln Gly Ile Ser Met Lys Asp Ser Asp Glu Glu Asp Glu Glu Asp Asp
 1205 1210 1215

<210> 3723

<211> 830

<212> DNA

<213> Homo sapiens

<400> 3723

atcctcttga tgcacaagat gaggggttttg cacctggacc tcaagccaga gaacatcctg
 60
 tgtgtcaaca ccaccgggca tttggtgaag atcattgact ttggcctggc acggaggtat
 120
 aacccaacg agaagctgaa ggtgaacttt gggacccag agttcctgtc acctgaggtg
 180
 gtgaattatg accaaatctc cgataagaca gacatgtgga gtatgggggt gatcacctac
 240
 atgctgctga gcggcctctc ccccttctctg ggagatgatg acacagagac cctaaacaac
 300
 gttctatctg gcaactggta ctttgatgaa gagacctttg aggccgtatc agacgaggcc
 360
 aaagactttg tctccaacct catcgtaag gaccagaggg cccggatgaa cgctgcccag
 420
 tgtctcgccc atccctggct caacaacctg gcggagaaaag ccaaacgctg taaccgacgc
 480
 cttaagtccc agatcttgct taagaaatac ctcatgaaga ggcgctggaa gaaaaacttc
 540
 attgctgtca gcgctgccaa ccgcttcaag aagatcagca gctcgggggc actgatggct
 600
 ctgggggtct gagccctggg cgcagctgaa gcctggacgc agccacacag tggccggggc
 660
 tgaagccaca cagcccagaa ggccagaaaa ggcagccaga tccccagggc agcctcggtta
 720

ggacaaggct gtgccaggct gggaggctcg gggctcccca cgccccatg cagtgaccgc
780
ttccccgatg tgagccgctt cggagtgtgg cctggatcca tctgtctagc
830

<210> 3724
<211> 203
<212> PRT
<213> Homo sapiens

<400> 3724
Ile Leu Leu Met His Lys Met Arg Val Leu His Leu Asp Leu Lys Pro
1 5 10 15
Glu Asn Ile Leu Cys Val Asn Thr Thr Gly His Leu Val Lys Ile Ile
20 25 30
Asp Phe Gly Leu Ala Arg Arg Tyr Asn Pro Asn Glu Lys Leu Lys Val
35 40 45
Asn Phe Gly Thr Pro Glu Phe Leu Ser Pro Glu Val Val Asn Tyr Asp
50 55 60
Gln Ile Ser Asp Lys Thr Asp Met Trp Ser Met Gly Val Ile Thr Tyr
65 70 75 80
Met Leu Leu Ser Gly Leu Ser Pro Phe Leu Gly Asp Asp Asp Thr Glu
85 90 95
Thr Leu Asn Asn Val Leu Ser Gly Asn Trp Tyr Phe Asp Glu Glu Thr
100 105 110
Phe Glu Ala Val Ser Asp Glu Ala Lys Asp Phe Val Ser Asn Leu Ile
115 120 125
Val Lys Asp Gln Arg Ala Arg Met Asn Ala Ala Gln Cys Leu Ala His
130 135 140
Pro Trp Leu Asn Asn Leu Ala Glu Lys Ala Lys Arg Cys Asn Arg Arg
145 150 155 160
Leu Lys Ser Gln Ile Leu Leu Lys Lys Tyr Leu Met Lys Arg Arg Trp
165 170 175
Lys Lys Asn Phe Ile Ala Val Ser Ala Ala Asn Arg Phe Lys Lys Ile
180 185 190
Ser Ser Ser Gly Ala Leu Met Ala Leu Gly Val
195 200

<210> 3725
<211> 1244
<212> DNA
<213> Homo sapiens

<400> 3725
ngaattcatg tgtcaggtaa ggatattaca aggaaacctg agatttctgg gcatgtaatt
60
tctgctcatg gcttatcagt cttgaatctg cgggatggaa gagagctgga tttcagatct
120
gaccatcttc acttttgttt tcaggccttt aaaattgtgc cctacaacac agagaccctt
180
gataaactgc taaccgaatc cctgaagaac aatatccctg caagcggact gcacctcttt
240
ggaatcaacc agctggaaga agaagatatg atgacaaatc agagggatga agagctgccc
300

accctgttgc attttgctgc gaagtatgga ctgaagaacc tcaactgcctt gttgetcacc
 360
 tgcccaggag ccttgcaggc gtacagcgtg gccacaagc atggccacta cccaacacc
 420
 atcgctgaga aacacggctt cagggacctg cggcagttca tcgacgagta tgtggaaacg
 480
 gtggacatgc tcaagagtca cattaagag gaactgatgc acggggagga ggctgatgct
 540
 gtgtacgagt ccatggccca ctttccaca gacctgctta tgaaatgctc gctcaacccc
 600
 ggctgtgacg aggatctcta tgagtccatg gctgcctttg tcccagctgc cactgaagac
 660
 ctctatgttg aaatgcttca ggccagtaca tctaaccxaa tccctggaga tggtttctct
 720
 cgggccacta aggactctat gatccgcaag tttttagaag gcaacagcat gggaatgacc
 780
 aatctggaga gagatcagtg ccatcttggc caggaagaag atgtttatca cacggtggat
 840
 gacgatgagg ctttttctgt ggacttggcc agcaggcccc ctgtcccagt gccagacca
 900
 gagaccactg ctctgtgtgc tcaccagctg cctgacaacg aaccatacat ttttaaaggc
 960
 aagtatggca gggaatgatg tccaactggc tctttggagc ttctcaacag ggatttctctg
 1020
 gatgacctgg ctttttgaac cattgctcag agactatccc cttctaaatg gtcttcaccc
 1080
 agccctacga gacaggggtc atactctggg gccagattct ggagctagaa taggagtaat
 1140
 gaccagagtc agtgctggcc ttcttgaag tatttacgca cagttgcaaa ggcaggtaaa
 1200
 caagaccctt gatataatct tatctcctga accccttcac gcgt
 1244

<210> 3726

<211> 325

<212> PRT

<213> Homo sapiens

<400> 3726

Xaa	Ile	His	Val	Ser	Gly	Lys	Asp	Ile	Thr	Arg	Lys	Pro	Glu	Ile	Ser
1				5					10					15	
Gly	His	Val	Ile	Ser	Ala	His	Gly	Leu	Ser	Val	Leu	Asn	Leu	Arg	Asp
		20						25					30		
Gly	Arg	Glu	Leu	Asp	Phe	Arg	Ser	Asp	His	Leu	His	Phe	Cys	Phe	Gln
	35						40					45			
Ala	Phe	Lys	Ile	Val	Pro	Tyr	Asn	Thr	Glu	Thr	Leu	Asp	Lys	Leu	Leu
	50					55					60				
Thr	Glu	Ser	Leu	Lys	Asn	Asn	Ile	Pro	Ala	Ser	Gly	Leu	His	Leu	Phe
65				70					75					80	
Gly	Ile	Asn	Gln	Leu	Glu	Glu	Glu	Asp	Met	Met	Thr	Asn	Gln	Arg	Asp
		85					90						95		
Glu	Glu	Leu	Pro	Thr	Leu	Leu	His	Phe	Ala	Ala	Lys	Tyr	Gly	Leu	Lys
		100					105					110			
Asn	Leu	Thr	Ala	Leu	Leu	Leu	Thr	Cys	Pro	Gly	Ala	Leu	Gln	Ala	Tyr

115 120 125
 Ser Val Ala Asn Lys His Gly His Tyr Pro Asn Thr Ile Ala Glu Lys
 130 135 140
 His Gly Phe Arg Asp Leu Arg Gln Phe Ile Asp Glu Tyr Val Glu Thr
 145 150 155 160
 Val Asp Met Leu Lys Ser His Ile Lys Glu Glu Leu Met His Gly Glu
 165 170 175
 Glu Ala Asp Ala Val Tyr Glu Ser Met Ala His Leu Ser Thr Asp Leu
 180 185 190
 Leu Met Lys Cys Ser Leu Asn Pro Gly Cys Asp Glu Asp Leu Tyr Glu
 195 200 205
 Ser Met Ala Ala Phe Val Pro Ala Ala Thr Glu Asp Leu Tyr Val Glu
 210 215 220
 Met Leu Gln Ala Ser Thr Ser Asn Pro Ile Pro Gly Asp Gly Phe Ser
 225 230 235 240
 Arg Ala Thr Lys Asp Ser Met Ile Arg Lys Phe Leu Glu Gly Asn Ser
 245 250 255
 Met Gly Met Thr Asn Leu Glu Arg Asp Gln Cys His Leu Gly Gln Glu
 260 265 270
 Glu Asp Val Tyr His Thr Val Asp Asp Asp Glu Ala Phe Ser Val Asp
 275 280 285
 Leu Ala Ser Arg Pro Pro Val Pro Val Pro Arg Pro Glu Thr Thr Ala
 290 295 300
 Pro Gly Ala His Gln Leu Pro Asp Asn Glu Pro Tyr Ile Phe Lys Gly
 305 310 315 320
 Lys Tyr Gly Arg Glu
 325

<210> 3727

<211> 630

<212> DNA

<213> Homo sapiens

<400> 3727

cggattcgag tcatcaagaa gaaaaagggtc attatgaaga agcgggaagaa gctaactcta
 60
 actcgcccca cccactggt gactgccggg ccccttgtga cccactcc agcagggacc
 120
 ctcgaccccg ctgagaaaca agaaacaggc tgctctcctt tgggtctgga gtcctgcga
 180
 gtttcagata gccggcttga ggcattccagc agccagtcct ttggtcttgg accacaccga
 240
 ggacggctca acattcagtc aggcctggag gacggcgatc tatatgatgg agcctgggtgt
 300
 gctgaggagc aggacgccga tccatgggtt caggtggacg ctgggcaccc caccgcttc
 360
 tcgggtgtta tcacacaggg caggaactct gtctggaggt atgactgggt cacatcatac
 420
 aaggtccagt tcagcaatga cagtcggacc tgggtggggaa gtaggaacca cagcagtggtg
 480
 atggacgcag tatttctctgc caattcagac ccagaaactc cagtgtctgaa cctcttgccg
 540
 gagccccagg tggeccgctt cattcgctg ctgccccaga cctggctcca gggaggcgcg
 600

ccttgccctcc gggcagagat cctggcctgc
630

<210> 3728

<211> 210

<212> PRT

<213> Homo sapiens

<400> 3728

Arg	Ile	Arg	Val	Ile	Lys	Lys	Lys	Lys	Val	Ile	Met	Lys	Lys	Arg	Lys
1				5					10					15	
Lys	Leu	Thr	Leu	Thr	Arg	Pro	Thr	Pro	Leu	Val	Thr	Ala	Gly	Pro	Leu
			20					25					30		
Val	Thr	Pro	Thr	Pro	Ala	Gly	Thr	Leu	Asp	Pro	Ala	Glu	Lys	Gln	Glu
		35					40					45			
Thr	Gly	Cys	Pro	Pro	Leu	Gly	Leu	Glu	Ser	Leu	Arg	Val	Ser	Asp	Ser
	50					55					60				
Arg	Leu	Glu	Ala	Ser	Ser	Ser	Gln	Ser	Phe	Gly	Leu	Gly	Pro	His	Arg
65				70					75					80	
Gly	Arg	Leu	Asn	Ile	Gln	Ser	Gly	Leu	Glu	Asp	Gly	Asp	Leu	Tyr	Asp
			85					90						95	
Gly	Ala	Trp	Cys	Ala	Glu	Glu	Gln	Asp	Ala	Asp	Pro	Trp	Phe	Gln	Val
			100					105					110		
Asp	Ala	Gly	His	Pro	Thr	Arg	Phe	Ser	Gly	Val	Ile	Thr	Gln	Gly	Arg
		115					120					125			
Asn	Ser	Val	Trp	Arg	Tyr	Asp	Trp	Val	Thr	Ser	Tyr	Lys	Val	Gln	Phe
	130					135					140				
Ser	Asn	Asp	Ser	Arg	Thr	Trp	Trp	Gly	Ser	Arg	Asn	His	Ser	Ser	Gly
145				150						155				160	
Met	Asp	Ala	Val	Phe	Pro	Ala	Asn	Ser	Asp	Pro	Glu	Thr	Pro	Val	Leu
			165					170						175	
Asn	Leu	Leu	Pro	Glu	Pro	Gln	Val	Ala	Arg	Phe	Ile	Arg	Leu	Leu	Pro
			180					185					190		
Gln	Thr	Trp	Leu	Gln	Gly	Gly	Ala	Pro	Cys	Leu	Arg	Ala	Glu	Ile	Leu
		195					200						205		
Ala	Cys														
	210														

<210> 3729

<211> 1552

<212> DNA

<213> Homo sapiens

<400> 3729

naggaaacgc tttgtctgtc cggcaagccg acggcccgt gctggcctcc gtgacgcggg
60
cctcctccgc gcctcgcggc atggagtaga aagggaccgc ggaagcccga aagcgaaggc
120
atcaagttat cagcagatgt caaaccattt gtccccagat ttgccgggct caatgtggca
180
tggttagagt cctcagaagc atgtgtcttc cccagctctg cagccacata ctatccgttt
240
gttcaggaac caccagtgc agagcagaaa atatatactg aagacatggc ctttggagct
300

tcaacttttc cacctcagta tttatcttct gagataactc ttcattccata tgcctattct
 360
 ccttataccc ttgactccac acagaatggt tactcagtgc ctggctccca gtatctttat
 420
 aaccaaccca gttgttaccg aggttttcaa acagtgaagc atcgaaatga gaacacatgc
 480
 cctctcccac aagaaatgaa agctctgttt aagaagaaaa cctatgatga gaaaaaacg
 540
 tatgatcagc aaaagtttga cagtgaagg gctgatggaa ctatatcatc tgagataaaa
 600
 tcagctagag gttcacatca tttgtccatt tacgctgaga atagtttgaa atcagatggt
 660
 taccataagc gaacagacag gaaatccaga atcattgcaa aaaatgtatc tacctccaaa
 720
 cctgagtttg aatttaccac actggacttt cctgaactgc aagggtgcaga gaacaatatg
 780
 tcagagatac agaagcaacc caagtgggga cctgtccact ctgtctctac cgacatttct
 840
 cttctaagag aagtagtaaa accagctgca gtgttatcaa aggggtgaaat agtgggtgaaa
 900
 aataacccaa atgaatctgt aactgcta at gccgctacca attctccttc atgtacaaga
 960
 gagttatctt ggacaccaat ggggttatgtt gttcgacaga cattatctac agaactgtca
 1020
 gcagccccta aaaatgttac ttctatgata aacttaaaga ccattgcttc atcagcagat
 1080
 cctaaaaatg ttagtatacc atcttctgaa gctttatctt cggatccttc ctacaacaaa
 1140
 gaaaaacaca ttattcatcc taccctaaaag tctaaagcat cacaaggtag tgaccttgaa
 1200
 caaatgaag cctcaagaaa gaataagaaa aagaaagaaa aatctacatc aaaatatgaa
 1260
 gtcttgacag ttcaagagcc tccaaggatt gaagatgccg aggaatttcc caacctggca
 1320
 gttgcatctg aaagaagaga cagaatagag acaccgaaat ttcaatctaa gcagcagcca
 1380
 caggataatt ttaaaaataa tgtaaagaag agccagcttc cagtgcagtt ggacttgggg
 1440
 ggcattgctga cagccctgga gaagaagcag cactctcagc atgcaaagca gtcctccaaa
 1500
 ccagtggtag tctcagttgg agcagtgcc a gtcctttcca aagaatgtgc ac
 1552

<210> 3730

<211> 422

<212> PRT

<213> Homo sapiens

<400> 3730

Met	Ala	Phe	Gly	Ala	Ser	Thr	Phe	Pro	Pro	Gln	Tyr	Leu	Ser	Ser	Glu
1				5					10					15	
Ile	Thr	Leu	His	Pro	Tyr	Ala	Tyr	Ser	Pro	Tyr	Thr	Leu	Asp	Ser	Thr
			20					25					30		
Gln	Asn	Val	Tyr	Ser	Val	Pro	Gly	Ser	Gln	Tyr	Leu	Tyr	Asn	Gln	Pro

```
<210> 3731
<211> 1704
<212> DNA
<213> Homo sapiens
```

<400> 3731

tacgtgctca gaaacctcta cgtccccaac cggaagggtga agtccctgtg ctgggcctcg
60
ctgaaccagt tggactctca cgttctgctg tgcttcgagg gaatcacaga tgcttcaagc
120
tgtgcagtgc tgctcccagc atcactgttc gtcaatagtc acccaggaat agaccggcct
180
ggcatgctct gcagtttccg gatccctggt gcctggtcct gtgcctggtc cctgaatata
240
caagcaaata actgcttcag tacaggcttg tctcggcggg tcctgttgac caacgtgggtg
300
acgggacacc ggcagtcctt tgggaccaac agtgatgtct tggcccagca gtttgctctc
360
atggctcctc tgctgtttta tggctgccgc tctggggaaa tctttgccat tgatctgcgt
420
tgtggaaatc aaggcaaggg atggaaggcc acccgctgtt tcatgattc agcagtgacc
480
tctgtgcgga tcctccaaga tgagcaatac ctgatggctt cagacatggc tggaaagatc
540
aagctgtggg acctgaggac cacgaagtgc gtaaggcagt acgaaggcca cgtgaatgag
600
tacgcctacc tgeccctgca tgtgcacgag gaagaaggaa tcctgggtggc agtggggccag
660
gactgctaca cgagaatctg gagcctccac gatgcccgcc tactgagaac catacctcc
720
ccgtaccctg cctccaaggc cgacattccc agtgtggcct tctcgtcgcg gctggggggc
780
tcccggggcg cgccggggct gctcatggct gtcgggcagg acctttactg ttactcctac
840
agctaattct gcagggcaca gcccagagcc atgtggattt gacttacggg agtaaagcgt
900
aactttttac tgcattctaat gaggggtgtt taagtgcacac tcagtgtaca cagatcccat
960
cctctggctg ctaggagaga agtgctgaat gttccgtgtg gagatgctca ggaaagtatt
1020
ttgagttaaa ttgctggctg agagagcttg gaagtccttt tcataaaagg tacctctttc
1080
cttttcttat tgaattctta gaacttagtt aaccctccct gccttttctt aacaaaaagg
1140
acttttctaa ggactgaaga ttggcaaaaa cgaaaagctt cttcctccaa gagcccattg
1200
aagaagccca gtgatgagac ggtgagatgg tttgagtcct cgggtgcctgg gtagcaggaa
1260
gaaagacctg catcctgcat ctgtacttgg ggaagccagc ggagaggacg gggaggttac
1320
ttctctaagt ttctgcagaa atattgaagg ctggagtttg gaatccttaa acttggcctt
1380
ctcaaactca gcagcagatc tccgggatcc tgctgttatt atccaaaggc gttggaagga
1440
aagatggatc ttcttacatg ctagaagttt taaacgggcc ttaacatgcc tttgttcaag
1500
caccttccag aatgtaaggc tcagcagctc tggtttctat tacggtgact tgaatgtcag
1560

attcaagggc cggcggtcaa aggaaattgg ttttgacttt ttgtaatcta ggagcgacag
 1620
 ttcgtgagat gtttattcag tgtaaagag cctgtttttc taccaaaca taaaaccaag
 1680
 agaagaaaaa aaaaaaaaaa aaaa
 1704

<210> 3732

<211> 281

<212> PRT

<213> Homo sapiens

<400> 3732

Tyr	Val	Leu	Arg	Asn	Leu	Tyr	Val	Pro	Asn	Arg	Lys	Val	Lys	Ser	Leu
1				5					10					15	
Cys	Trp	Ala	Ser	Leu	Asn	Gln	Leu	Asp	Ser	His	Val	Leu	Leu	Cys	Phe
			20					25					30		
Glu	Gly	Ile	Thr	Asp	Ala	Ser	Ser	Cys	Ala	Val	Leu	Leu	Pro	Ala	Ser
		35					40					45			
Leu	Phe	Val	Asn	Ser	His	Pro	Gly	Ile	Asp	Arg	Pro	Gly	Met	Leu	Cys
	50					55				60					
Ser	Phe	Arg	Ile	Pro	Gly	Ala	Trp	Ser	Cys	Ala	Trp	Ser	Leu	Asn	Ile
65					70					75				80	
Gln	Ala	Asn	Asn	Cys	Phe	Ser	Thr	Gly	Leu	Ser	Arg	Arg	Val	Leu	Leu
			85						90					95	
Thr	Asn	Val	Val	Thr	Gly	His	Arg	Gln	Ser	Phe	Gly	Thr	Asn	Ser	Asp
		100						105					110		
Val	Leu	Ala	Gln	Gln	Phe	Ala	Leu	Met	Ala	Pro	Leu	Leu	Phe	Asn	Gly
		115					120					125			
Cys	Arg	Ser	Gly	Glu	Ile	Phe	Ala	Ile	Asp	Leu	Arg	Cys	Gly	Asn	Gln
	130					135				140					
Gly	Lys	Gly	Trp	Lys	Ala	Thr	Arg	Leu	Phe	His	Asp	Ser	Ala	Val	Thr
145					150					155				160	
Ser	Val	Arg	Ile	Leu	Gln	Asp	Glu	Gln	Tyr	Leu	Met	Ala	Ser	Asp	Met
			165						170					175	
Ala	Gly	Lys	Ile	Lys	Leu	Trp	Asp	Leu	Arg	Thr	Thr	Lys	Cys	Val	Arg
		180						185					190		
Gln	Tyr	Glu	Gly	His	Val	Asn	Glu	Tyr	Ala	Tyr	Leu	Pro	Leu	His	Val
	195						200					205			
His	Glu	Glu	Glu	Gly	Ile	Leu	Val	Ala	Val	Gly	Gln	Asp	Cys	Tyr	Thr
	210					215					220				
Arg	Ile	Trp	Ser	Leu	His	Asp	Ala	Arg	Leu	Leu	Arg	Thr	Ile	Pro	Ser
225					230					235				240	
Pro	Tyr	Pro	Ala	Ser	Lys	Ala	Asp	Ile	Pro	Ser	Val	Ala	Phe	Ser	Ser
			245						250					255	
Arg	Leu	Gly	Gly	Ser	Arg	Gly	Ala	Pro	Gly	Leu	Leu	Met	Ala	Val	Gly
		260					265						270		
Gln	Asp	Leu	Tyr	Cys	Tyr	Ser	Tyr	Ser							
	275						280								

<210> 3733

<211> 515

<212> DNA

<213> Homo sapiens

<400> 3733
 nngggccgag ctgtccgacg tgtcactgca gggaccgcgc cgggggtgggt ctcgggctct
 60
 cgctaccgga gagggaggag aagggggagg ttaaagggga aggaccccg aagtgcctcc
 120
 tcctcagtgc gggagaggga gacgccgggg gcangtccat gcctcccgcg gcgtgggttg
 180
 tgcgtcccag gtgacgtcag aagcagcccg cccctgcctg gatgggtgcgc cctgagtga
 240
 gtcaggagca gaggccggag ctgtccatca gcaccaaagg ccgcggggcg gctcagggca
 300
 tggggcccg gttctggggc ggcccagacc ccggctcctg cgccttcccc ttcctcagga
 360
 nccagcccga gttcccggac gccgcgggac tggagtcca gccggtgttg gacgtggagc
 420
 ggccgcccga ccgcgccgac accattctct ccggcccagc agcccccttc ctgcacgac
 480
 ggactttccc tggaccccag tcagttggag cctct
 515

<210> 3734
 <211> 171
 <212> PRT
 <213> Homo sapiens

<400> 3734
 Xaa Gly Arg Ala Val Arg Arg Val Thr Ala Gly Thr Arg Pro Gly Trp
 1 5 10 15
 Val Ser Gly Ser Arg Tyr Arg Arg Gly Arg Arg Gly Arg Leu Lys
 20 25 30
 Gly Lys Asp Pro Gly Ser Ala Pro Ser Ser Val Arg Glu Arg Glu Thr
 35 40 45
 Pro Gly Ala Xaa Pro Cys Leu Pro Arg Arg Gly Trp Cys Val Pro Gly
 50 55 60
 Asp Val Arg Ser Ser Pro Pro Leu Pro Gly Trp Cys Ala Leu Ser Asp
 65 70 75 80
 Val Arg Ser Arg Gly Arg Ser Cys Pro Ser Ala Pro Lys Ala Ala Gly
 85 90 95
 Gly Leu Arg Ala Trp Gly Arg Gly Ser Gly Ala Ala Arg Ala Pro Ala
 100 105 110
 Pro Ala Pro Ser Pro Ser Ser Gly Xaa Ser Pro Ser Ser Arg Thr Pro
 115 120 125
 Arg Asp Trp Ser Ala Ser Arg Cys Trp Thr Trp Ser Gly Ala Ala Thr
 130 135 140
 Ala Pro Thr Pro Phe Ser Pro Ala Gln Gln Pro Pro Ser Ser His Asp
 145 150 155 160
 Gly Leu Ser Leu Asp Pro Ser Gln Leu Glu Pro
 165 170

<210> 3735
 <211> 2512
 <212> DNA
 <213> Homo sapiens

<400> 3735
ngcaggttct tcggaaggct tgtagctcca aaatggatcg ccagagtgtt ctccatgtac
60
tgggcatatt gaaaaactcc aaatttctca aagtctgect gcctgcttat gtggtaggga
120
tgatcactga acccatccct gacatccgaa accagtatcc agagcacata agcaacatca
180
tctccctcct ccaggacctt gtaagtgtct tccctgccag ctctgtgcag gaaacttcca
240
tgctggtttc cctcctgcca acctctctta atgctctgag agcctctggt gttgacatag
300
aagaggaaac ggagaagaac ctggaaaagg tacagactat cattgaacat ctgcaggaaa
360
agaggcgaga gggcactttg agagtggata cctacactct agtgcagcct gaggcagaag
420
accatgttga gagctaccga accatgccca tttaccctac ctacaatgaa gtgcacttgg
480
atgagaggcc cttccttcgc cccaatatca tttctggaaa atacgacagc actgctatct
540
atctggatac ccacttccgg ctctgcgag aagatttcgt cagaccttta cgggaaggta
600
ttttggaact tctccaaagc tttgaagacc agggcctgag gaagagaaaag tttgatgaca
660
tccgaatcta ctttgacacc aggattatca ccccatgtg ttcacatca ggcatagtct
720
acaagggtgca gtttgacaca aaaccactga agtttgttcg ctggcagaat tccaaacgat
780
tgctctatgg gtctttggta tgcatgtcca aggacaactt cgagacattt ctttttgcca
840
ccgtatctaa caggagcag gaagatctct gccgaggaat tgtccagctc tgcttcaatg
900
agcaaagcca acagctgcta gcagaggtcc agccctctga ctctttcctc atggtagaga
960
caactgcata ctttgaggcc tacaggcacg tcctggaagg actccaggag gtccaggagg
1020
aagatgttcc cttccagagg aatatcgtgg agtgtaactc tcatgtgaag gagccaaggt
1080
acttgcta at ggggggcaga tatgacttta ccccttaat agagaatcct tcagccactg
1140
gggaatttct aagaaatgtc gagggtttga gacatcccag aattaatgtc ttagatcctg
1200
gccagtggcc ctcaaaagaa gccctgaagc tggatgactc ccagatggaa gccttgagcgt
1260
ttgctctcac aagggaactg gctattattc aaggacctcc tggaaacaggc aaaacctatg
1320
tgggtctaaa aattgttcag gccctcctaa ccaacgagtc tggttgcaa attagcctcc
1380
agaagtcccc catcttggtt gtgtgttata ctaatcatgc tttggaccag tttctggaag
1440
gcatctacaa ttgtcagaag accagcattg tgcggtggg tggaggagc aacagtgaag
1500
tcctgaagca gttcaccta agggagctga ggaacaagcg ggaattccgc cgcaacctcc
1560

ccatgcacct ccgaagggcc tacatgagta tcatgacaca gatgaaggag tcagagcaag
 1620
 agcttcatga aggagccaag accctggagt gcaccatgcg tgggtgtccta cgggaacagt
 1680
 acctgcagaa gtacatctca ccccgact gggaaagtct catgaatgga ccagtgcagg
 1740
 atagtgaatg gatttgcttc cagcactgga agcattccat gatgctggag tggctaggtc
 1800
 ttggtgtcgg ttctttcacg caaagtgttt ctccagcagg acctgagaat acagcccagg
 1860
 cagaagggga tgaggaggaa gaaggggagg aggagagttc gctgatagag atcgagagg
 1920
 aagctgacct gattcaagca gaccgggtga ttgaggagga agaggtggtg agggcccagg
 1980
 ggcggaagaa ggaagagagt ggagcagacc aggagtggc taaaatgctt ctggccatga
 2040
 ggctagacca ttgtggcact gggacagcag ctggacagga gcaagccaca ggagagtggc
 2100
 agaccagcg caaccagaa aaagaaaatg aaaaaaagag tgaaggatga gcttcgcaaa
 2160
 ctgaacacca tgctgcagc cgaggccaac gagatcgagg atgtttggca cctggacctc
 2220
 agttctcgct ggcagcttta taggctctgg ctacagttgt accaggctga cccccgcc
 2280
 gggaagatec tcagctatga acgccagtac cgcacatcag cagaaagaat ggccgagctg
 2340
 agactccagg aagacctgca cattcttaaa gatgcccagg ttgtaggaat gacaaccaca
 2400
 ggtgctgcca aataccgcca gatcctacag aaggtggagc cgaggattgt catagtggaa
 2460
 gaagctgagg aagtccttga ggcccatacc attgccacat tgagcaaagc tt
 2512

<210> 3736

<211> 155

<212> PRT

<213> Homo sapiens

<400> 3736

Thr	Ile	Val	Ala	Leu	Gly	Gln	Gln	Leu	Asp	Arg	Ser	Lys	Pro	Gln	Glu
1				5				10						15	
Ser	Gly	Arg	Pro	Ser	Ala	Thr	Gln	Lys	Lys	Met	Lys	Lys	Lys	Arg	Val
			20					25					30		
Lys	Asp	Glu	Leu	Arg	Lys	Leu	Asn	Thr	Met	Pro	Ala	Ala	Glu	Ala	Asn
		35					40					45			
Glu	Ile	Glu	Asp	Val	Trp	His	Leu	Asp	Leu	Ser	Ser	Arg	Trp	Gln	Leu
		50				55				60					
Tyr	Arg	Leu	Trp	Leu	Gln	Leu	Tyr	Gln	Ala	Asp	Thr	Pro	Pro	Gly	Lys
65					70				75					80	
Ile	Leu	Ser	Tyr	Glu	Arg	Gln	Tyr	Arg	Thr	Ser	Ala	Glu	Arg	Met	Ala
			85					90					95		
Glu	Leu	Arg	Leu	Gln	Glu	Asp	Leu	His	Ile	Leu	Lys	Asp	Ala	Gln	Val
			100					105					110		
Val	Gly	Met	Thr	Thr	Thr	Gly	Ala	Ala	Lys	Tyr	Arg	Gln	Ile	Leu	Gln

	115		120		125										
Lys	Val	Glu	Pro	Arg	Ile	Val	Ile	Val	Glu	Glu	Ala	Ala	Glu	Val	Leu
	130					135					140				
Glu	Ala	His	Thr	Ile	Ala	Thr	Leu	Ser	Lys	Ala					
145						150					155				

<210> 3737

<211> 1046

<212> DNA

<213> Homo sapiens

<400> 3737

```

ngtgctgtgg ctgcaggctg gcagggtggca gcccctatgcc cagggtgcctg cgtatgctac
60
aatgagccca aggtgacgac aagctgcccc cagcagggcc tgcaggctgt gcccggtgggc
120
atccctgctg ccagccagcg catcttctctg cacggcaacc gcatctcgca tgtgccagct
180
gccagcttcc gtgcctgccc caacctcacc atcctgtggc tgcactcgaa tgtgctggcc
240
cgaattgatg cggctgcctt cactggcctg gccctcctgg gagcactgga cctcagcgat
300
aatgcacagc tccggtctgt ggaccctgcc acattccacg gcctggggccg cctacacacg
360
ctgcacctgg accgctgcgg cctgcaggag ctgggcccgg ggctgttccg cggcctggct
420
gccctgcagt acctctacct gcaggacaac gcgctgcagg cactgcctga tgacaccttc
480
cgcgacctgg gcaacctcac acacctcttc ctgcacggca accgcatctc cagcgtgccc
540
gagcgcgcct tccgtgggct gcacagcctc gaccgtctcc tactgcacca gaaccgcgtg
600
gcccctgtgc acccgcatgc cttccgtgac cttggccgccc tcatgacact ctatctgttt
660
gccacaatc tatcagcgct gccactgag gccctggccc cctgcggtgc cctgcagtag
720
ctgaggctca acgacaacct ctgggtgtgt gactgccggg cagccccact ctgggcctgg
780
ctgcagaagt tccgcggctc ctccctccgag gtgccctgca gcctcccgca acgcctggct
840
ggcctgacc tcaaagcct agctgccaat gacctgcagg gctgcgctgt ggccaccggc
900
ccttaccatc ccatctggac cggcagggcc accgatgagg agccgctggg gcttcccaag
960
tgctgccagc cagatgccgc tgacaaggcc tcagtactgg agcctggaag accagcttgc
1020
gcaggcaatg cgctgaaggg acgcgt
1046

```

<210> 3738

<211> 348

<212> PRT

<213> Homo sapiens

<400> 3738
 Xaa Ala Val Ala Ala Gly Trp Gln Val Ala Ala Pro Cys Pro Gly Ala
 1 5 10 15
 Cys Val Cys Tyr Asn Glu Pro Lys Val Thr Thr Ser Cys Pro Gln Gln
 20 25 30
 Gly Leu Gln Ala Val Pro Val Gly Ile Pro Ala Ala Ser Gln Arg Ile
 35 40 45
 Phe Leu His Gly Asn Arg Ile Ser His Val Pro Ala Ala Ser Phe Arg
 50 55 60
 Ala Cys Arg Asn Leu Thr Ile Leu Trp Leu His Ser Asn Val Leu Ala
 65 70 75 80
 Arg Ile Asp Ala Ala Phe Thr Gly Leu Ala Leu Leu Gly Ala Leu
 85 90 95
 Asp Leu Ser Asp Asn Ala Gln Leu Arg Ser Val Asp Pro Ala Thr Phe
 100 105 110
 His Gly Leu Gly Arg Leu His Thr Leu His Leu Asp Arg Cys Gly Leu
 115 120 125
 Gln Glu Leu Gly Pro Gly Leu Phe Arg Gly Leu Ala Ala Leu Gln Tyr
 130 135 140
 Leu Tyr Leu Gln Asp Asn Ala Leu Gln Ala Leu Pro Asp Asp Thr Phe
 145 150 155 160
 Arg Asp Leu Gly Asn Leu Thr His Leu Phe Leu His Gly Asn Arg Ile
 165 170 175
 Ser Ser Val Pro Glu Arg Ala Phe Arg Gly Leu His Ser Leu Asp Arg
 180 185 190
 Leu Leu Leu His Gln Asn Arg Val Ala His Val His Pro His Ala Phe
 195 200 205
 Arg Asp Leu Gly Arg Leu Met Thr Leu Tyr Leu Phe Ala Asn Asn Leu
 210 215 220
 Ser Ala Leu Pro Thr Glu Ala Leu Ala Pro Leu Arg Ala Leu Gln Tyr
 225 230 235 240
 Leu Arg Leu Asn Asp Asn Pro Trp Val Cys Asp Cys Arg Ala Arg Pro
 245 250 255
 Leu Trp Ala Trp Leu Gln Lys Phe Arg Gly Ser Ser Ser Glu Val Pro
 260 265 270
 Cys Ser Leu Pro Gln Arg Leu Ala Gly Arg Asp Leu Lys Arg Leu Ala
 275 280 285
 Ala Asn Asp Leu Gln Gly Cys Ala Val Ala Thr Gly Pro Tyr His Pro
 290 295 300
 Ile Trp Thr Gly Arg Ala Thr Asp Glu Glu Pro Leu Gly Leu Pro Lys
 305 310 315 320
 Cys Cys Gln Pro Asp Ala Ala Asp Lys Ala Ser Val Leu Glu Pro Gly
 325 330 335
 Arg Pro Ala Ser Ala Gly Asn Ala Leu Lys Gly Arg
 340 345

<210> 3739

<211> 1252

<212> DNA

<213> Homo sapiens

<400> 3739

tcataccttat cttcgtcatt ttctgggctg agcttttttg acaaggtgct gtgccagtct
 60

acaccctca gccagctgtt cttggaggte ctgcccctgg gacttgctcg gctcatccag
 120
 agtgaggagg gcctggagat gctcattcaa tgagcgggag gcacctctcc cttcccgtaa
 180
 cttctccctt aactgggtca gctctcgttc ctgagagtga accaggactt tatattgctg
 240
 tatttcttct gtcggttggc caggaagccg gccagttgag ttagaaaaca tctctctttg
 300
 aggtttctga actgctgttt gttctctgcc aactgggggc gcaatttctc gttgatttct
 360
 agaatgttca tctctgcctt ctgctggac aaagggcccg ctgataccac catgctgacg
 420
 tttgtggcag aagaggtgga gtcagggact tactgttggtg aaaaatgtga tcaactccca
 480
 cagcacttta ggatccttca ccacaaaaac aagggttcgag gtgcctcaac tcagagctga
 540
 aagcactgcc agtagctcag actctgataa gagtgaggta gattgtggcc agcgtgccag
 600
 gtaaccgtct tgatccatag gctcacattt gatcccaact ggcggtctgt tcttggcatt
 660
 aactttggat tccaaccag taaatcttag caagatctga gtttctccag gtatgatatt
 720
 attttgtttg accatcctta tcttcaaggg ctgttggatc tggcagctct tgatgtcagc
 780
 ccacaccatg tgaggctgct cttggtgcac cgaatgggga agtttctaca tcagggcctc
 840
 ggagaatcca ctggaagccc tggacagtgg gagtcagcgg cacccccagt gtggaggcca
 900
 agagcacaca gactgaagc tccaggacac cctcaggagg acggcaaggg acaattggct
 960
 ggtgagagcc cgggtcaccg ggaaccttcg cctgggtcta aacaggattt gccttcagat
 1020
 tgcctcagaa acgctgggtg gacttcgcgt aacttcccat tcacagggca gccggcagcc
 1080
 gcgcgcgcgc gcctcgccc agctcctggc gccgcagatc gcccgctccg cgttcccaaa
 1140
 agccccgcgc tcgctcagaa gctcgggcag cctcgcgacc ctcacctacc cctcccaata
 1200
 tcgcccgtgt ctcaaccgcc gccagccca tagcctgcgg ccagctggat cc
 1252

<210> 3740

<211> 139

<212> PRT

<213> Homo sapiens

<400> 3740

Met	Gly	Lys	Phe	Leu	His	Gln	Gly	Leu	Gly	Glu	Ser	Thr	Gly	Ser	Pro
1				5				10						15	
Gly	Gln	Trp	Glu	Ser	Ala	Ala	Pro	Pro	Val	Trp	Arg	Pro	Arg	Ala	His
			20					25					30		
Ser	Thr	Glu	Ala	Pro	Gly	His	Pro	Gln	Glu	Asp	Gly	Lys	Gly	Gln	Leu
		35					40					45			
Ala	Gly	Glu	Ser	Pro	Gly	His	Arg	Glu	Pro	Ser	Pro	Gly	Ser	Lys	Gln

```

      50              55              60
Asp Leu Pro Ser Asp Cys Leu Arg Asn Ala Gly Trp Thr Ser Arg Asn
65              70              75              80
Phe Pro Phe Thr Gly Gln Pro Ala Ala Ala Pro Pro Arg Leu Gly Pro
      85              90              95
Ala Pro Gly Ala Ala Asp Arg Pro Ser Arg Val Pro Lys Ser Pro Ala
      100              105              110
Leu Ala Gln Lys Leu Gly Gln Pro Arg Asp Pro His Leu Pro Leu Pro
      115              120              125
Ile Ser Pro Leu Ser Gln Pro Pro Pro Ser Pro
      130              135

```

<210> 3741
 <211> 562
 <212> DNA
 <213> Homo sapiens

```

<400> 3741
cagacagcaa gcgacggccc agctcctcaa ggccacctcc gacctcggcg ggggtggggca
60
gtcgtgtcca ctgtggggat ccacgtcctg actaaccttg tgttcctaga aatccctcac
120
cggcagatcg gtgcctcctg aatcccaccc aaaattccca ctgggaatgt gttcctgaaa
180
gagctgcccc ggcttgagaa agcctctttt cagaccaaac ttcgtattca aagctcaaaa
240
agaactgcac acaattagga cagtcataca agatgctgcc cctaactctg ccacaatctg
300
cgagaaggga ggcggggctt ccgagggcaa agtgcccctg ggaagggatc cgcagggaac
360
agctttgaaa ggaccacagc ccccagccac gaggggagca agcacgagcc ggggagagag
420
ctctgcgctc gcacacggga ttcattctcg ccgcctctgc ccgtttccag caacacggag
480
ccaggcggaa acagtttctc cagcccatte gcctccccga ctcttcctct cacggcacgg
540
ctgggctgct ttcattcacg gt
562

```

<210> 3742
 <211> 138
 <212> PRT
 <213> Homo sapiens

```

<400> 3742
Met Gly Trp Arg Asn Cys Phe Arg Leu Ala Pro Cys Cys Trp Lys Arg
1      5      10      15
Ala Glu Ala Ala Glu Met Asn Pro Val Cys Glu Arg Arg Ala Leu Ser
      20      25      30
Pro Ala Arg Ala Cys Ser Pro Arg Gly Trp Gly Leu Trp Ser Phe Gln
      35      40      45
Ser Cys Ser Leu Arg Ile Pro Ser Gln Gly His Phe Ala Leu Gly Ser
      50      55      60
Pro Ala Ser Leu Leu Ala Asp Cys Gly Arg Ile Arg Gly Ser Ile Leu

```

65					70					75					80
Tyr	Asp	Cys	Pro	Asn	Cys	Val	Gln	Phe	Phe	Leu	Ser	Phe	Glu	Tyr	Glu
				85					90					95	
Val	Trp	Ser	Glu	Lys	Arg	Leu	Ser	Gln	Ala	Trp	Ala	Ala	Leu	Ser	Gly
			100					105					110		
Thr	His	Ser	Gln	Trp	Glu	Phe	Trp	Val	Gly	Phe	Arg	Arg	His	Arg	Ser
		115					120					125			
Ala	Gly	Glu	Gly	Phe	Leu	Gly	Thr	Gln	Gly						
	130						135								

<210> 3743

<211> 468

<212> DNA

<213> Homo sapiens

<400> 3743

```

nntcatgagc cttcttaca gctccatttt ggcaaggcgc tgacaatggc ggaggctgaa
60
ggcaatgcaa gctgcacagt cagtctaggg ggtgcccaata tggcagagac ccacaaagcc
120
atgatcctgc aactcaatcc cagtgagaac tgcacctgga caatagaaag accagaaaac
180
aaaagcatca gaattatctt ttcctatgtc cagcttgatc cagatggaag ctgtgaaagt
240
gaaaacatta aagtctttga cggaacctcc agcaatgggc ctctgctagg gcaagtctgc
300
agtaaaaacg actatgttcc tgtatttgaa tcatcatcca gtacattgac gtttcaaata
360
gttactgact cagcaagaat tcaaagaact gtctttgtgt tctagtagtt cttatttcct
420
aacatcttta ttccaaagtg tggcggttac ctggatccct ggaaggat
468

```

<210> 3744

<211> 134

<212> PRT

<213> Homo sapiens

<400> 3744

Xaa	His	Glu	Pro	Ser	Tyr	Lys	Leu	His	Phe	Gly	Lys	Ala	Leu	Thr	Met
1				5					10					15	
Ala	Glu	Ala	Glu	Gly	Asn	Ala	Ser	Cys	Thr	Val	Ser	Leu	Gly	Gly	Ala
			20					25					30		
Asn	Met	Ala	Glu	Thr	His	Lys	Ala	Met	Ile	Leu	Gln	Leu	Asn	Pro	Ser
		35					40					45			
Glu	Asn	Cys	Thr	Trp	Thr	Ile	Glu	Arg	Pro	Glu	Asn	Lys	Ser	Ile	Arg
	50					55				60					
Ile	Ile	Phe	Ser	Tyr	Val	Gln	Leu	Asp	Pro	Asp	Gly	Ser	Cys	Glu	Ser
65					70					75				80	
Glu	Asn	Ile	Lys	Val	Phe	Asp	Gly	Thr	Ser	Ser	Asn	Gly	Pro	Leu	Leu
			85					90					95		
Gly	Gln	Val	Cys	Ser	Lys	Asn	Asp	Tyr	Val	Pro	Val	Phe	Glu	Ser	Ser
			100				105					110			
Ser	Ser	Thr	Leu	Thr	Phe	Gln	Ile	Val	Thr	Asp	Ser	Ala	Arg	Ile	Gln

115
Arg Thr Val Phe Val Phe
130

120

125

<210> 3745

<211> 345

<212> DNA

<213> Homo sapiens

<400> 3745

acgcgtcgaa aggggaagagc agaggacgct ggctctcatg gcaggatggg gtgtgtacgg
60
gacgctgtgg gagaggaaaa cagccacatg tgggctggct gcttggagga gacacatgag
120
ccgtgaacac gtctcccccg gccgctccct ggttccatgc gtgctcgtct tgggcaccac
180
gagaacacag ccatgcagcc cccgatcctg cagccacagc cacggcatcg cctggtcgga
240
tgcagcatct gctccggacg cctctcgtct tcggtgccag gcctgccagg ccaagccccg
300
attctcaggg gcggcaggag gtgggaggca cgtttgggag gatcc
345

<210> 3746

<211> 102

<212> PRT

<213> Homo sapiens

<400> 3746

Met	Ala	Gly	Trp	Cys	Val	Tyr	Gly	Thr	Leu	Trp	Glu	Arg	Lys	Thr	Ala
1				5					10					15	
Thr	Cys	Gly	Leu	Ala	Ala	Trp	Arg	Arg	His	Met	Ser	Arg	Glu	His	Val
			20					25					30		
Ser	Pro	Gly	Arg	Ser	Leu	Val	Pro	Cys	Val	Leu	Val	Leu	Gly	Thr	Thr
		35					40					45			
Arg	Thr	Gln	Pro	Cys	Ser	Pro	Arg	Ser	Cys	Ser	His	Ser	His	Gly	Ile
		50				55					60				
Ala	Trp	Ser	Asp	Ala	Ala	Ser	Ala	Pro	Asp	Ala	Ser	Arg	Cys	Arg	Cys
65					70				75					80	
Gln	Ala	Cys	Gln	Ala	Lys	Pro	Arg	Phe	Ser	Gly	Ala	Ala	Gly	Gly	Gly
			85						90					95	
Arg	His	Val	Trp	Ala	Asp										
					100										

<210> 3747

<211> 800

<212> DNA

<213> Homo sapiens

<400> 3747

cctaggcgag gcgctggcgc tggggctctgg ctggcgctcat gcgtgccacg ctctcctcta
60
cgcgccggac cctgggatgc tcttcggccg catcccgtg cgctacgcca tactgggtgag
120

aagggggcgc gcccgccac tttctgctg agccccgcac cctctctggt ggtctcctct
180
ggggcgcccc tgccaatccc cgcttcccc tcccgcagat gcagatgcgc ttcgatggac
240
gcctgggctt ccccggcgga ttcgtggaca cgcaggacag aagcctagag gacgggctga
300
accgcgagct gcgcgaggag ctggggcgaag cggctgccgc tttccgcgtg gagcgactg
360
actaccgcag ctcccacgtc ggggtcaggg ccacgcgttg tggcccactt ctatgccaag
420
cgtctgacgc tcgaggagct gttggctgtg gagggcggcg caacacgcgc caaggaccac
480
gggctggagg tgggaccagc ctgggactct gtccctttcc caatttcctc ttctcccaaa
540
gctttctctc cccaagaaa gcatccctgg agaaaagtct ttgcccctct gaccttgccc
600
tctccccagc tttcttggtg gagttgggat cgtgatcatc tatactctga attagtactg
660
ccaacctggg ctttctgtaa aggtctttcc caccctttac caggagagat cttttctaga
720
acacactcat ccattgtctt ctgctgttcc ctattgacag tgtgatagat tatcacatta
780
tctaggtgtg gcaacctagg
800

<210> 3748

<211> 138

<212> PRT

<213> Homo sapiens

<400> 3748

Met	Gln	Met	Arg	Phe	Asp	Gly	Arg	Leu	Gly	Phe	Pro	Gly	Gly	Phe	Val
1				5					10					15	
Asp	Thr	Gln	Asp	Arg	Ser	Leu	Glu	Asp	Gly	Leu	Asn	Arg	Glu	Leu	Arg
			20					25					30		
Glu	Glu	Leu	Gly	Glu	Ala	Ala	Ala	Ala	Phe	Arg	Val	Glu	Arg	Thr	Asp
		35				40						45			
Tyr	Arg	Ser	Ser	His	Val	Gly	Val	Arg	Ala	Thr	Arg	Cys	Gly	Pro	Leu
	50					55					60				
Leu	Cys	Gln	Ala	Ser	Asp	Ala	Arg	Gly	Ala	Val	Gly	Cys	Gly	Gly	Arg
65					70					75				80	
Arg	Asn	Thr	Arg	Gln	Gly	Pro	Arg	Ala	Gly	Gly	Gly	Thr	Ser	Leu	Gly
				85					90					95	
Leu	Cys	Pro	Phe	Pro	Asn	Phe	Leu	Phe	Ser	Gln	Ser	Phe	Leu	Ser	Pro
			100					105					110		
Lys	Lys	Ala	Ser	Leu	Glu	Lys	Ser	Leu	Cys	Pro	Ser	Asp	Leu	Ala	Leu
		115					120					125			
Ser	Pro	Ala	Phe	Leu	Val	Glu	Leu	Gly	Ser						
						130		135							

<210> 3749

<211> 648

<212> DNA

<213> Homo sapiens

<400> 3749

cgcgccccct gggaggatcc tgccaagtgg gtgatggaca catatccatg ggcagccagc
 60
 ccacaacagc acgagtggcc tcccctgctg cagttacggc ctgaggatgt cggcttcgac
 120
 ggctactcca tgccctggga gggatcgaca agcaagcaga tgccccccag tgatgctgaa
 180
 ggtgaccgcg tgatgaacat gctgatgagg ctgcaggagg cagccaacta ctccagcccc
 240
 cagagctatg acagcgactc caacagcaac agccatcacg atgacatctt ggactcctct
 300
 ttggagtcca ctctgtgaca ggggcccggga gccagcgcc ctctcttctt cctcaccgca
 360
 ttccacctgc atccccaca tcacctgaa gatgacttcc tgagccagcc cccagccaca
 420
 gccttagagc tgcggaaca ccgagacccc ccgtccttca gcctcgacct ggggtgcaggc
 480
 atcccgggcc agctgcctgc ggaccgcttc cttccacagc gagaactgca ctaccttctg
 540
 ttgtacttta attattgttt tgccctgttg ctgtgacctc cctaagacac tgaagatact
 600
 tctcgggaaa ggatcatcgc cgttgaaatg aaaaaaaaaa aaaaaaaaaa
 648

<210> 3750

<211> 105

<212> PRT

<213> Homo sapiens

<400> 3750

Arg	Ala	Pro	Trp	Glu	Asp	Pro	Ala	Lys	Trp	Val	Met	Asp	Thr	Tyr	Pro
1				5					10					15	
Trp	Ala	Ala	Ser	Pro	Gln	Gln	His	Glu	Trp	Pro	Pro	Leu	Leu	Gln	Leu
			20					25					30		
Arg	Pro	Glu	Asp	Val	Gly	Phe	Asp	Gly	Tyr	Ser	Met	Pro	Arg	Glu	Gly
		35				40					45				
Ser	Thr	Ser	Lys	Gln	Met	Pro	Pro	Ser	Asp	Ala	Glu	Gly	Asp	Pro	Leu
	50				55					60					
Met	Asn	Met	Leu	Met	Arg	Leu	Gln	Glu	Ala	Ala	Asn	Tyr	Ser	Ser	Pro
65				70					75					80	
Gln	Ser	Tyr	Asp	Ser	Asp	Ser	Asn	Ser	Asn	Ser	His	His	Asp	Asp	Ile
			85				90							95	
Leu	Asp	Ser	Ser	Leu	Glu	Ser	Thr	Leu							
			100					105							

<210> 3751

<211> 554

<212> DNA

<213> Homo sapiens

<400> 3751

gcgcgcctgt ctgccctcgc acgtgcgctg gcagggccgc cgctcgcgcc tcaccatgga
 60

cctggccccg ctgctgctcg cggctcggtc gccccgagcg gggccaaggg cgtttcctac
 120
 acgcagggcc agagtccgga gccgcggacc cgcgaggtat ttctactacg tggaccacca
 180
 gggccagctt ttcttgatg attccaaaat gaagaatttc atcacctgct tcaaagaccc
 240
 gcagttcctg gtcacettct tctcccgctt gagacccaac cgcagcgggc gctacgaggg
 300
 cgctttcccc ttctctcgc cctgcggcag agagcgcaac ttctgcgct gcgaggaccg
 360
 gccggtggtc ttcacgcacc tgetgaccgc ggaccacggg cctccgcgcc tctctactg
 420
 cggcgggtggc gaggccttg ccgtgccctt cgagccggcg cgctgctgc ccctggccgc
 480
 caacgggcgc ctgtaccacc cggcgccgga gcgtgcgggc ggcgtgggccc tgggtgcgcc
 540
 ttcgcccctg gccc
 554

<210> 3752

<211> 66

<212> PRT

<213> Homo sapiens

<400> 3752

Ala	Arg	Leu	Ser	Ala	Leu	Ala	Arg	Ala	Leu	Ala	Gly	Pro	Pro	Pro	Arg
1				5					10					15	
Pro	His	His	Gly	Pro	Gly	Pro	Ala	Ala	Ala	Arg	Gly	Ser	Val	Ala	Pro
			20					25					30		
Ser	Gly	Ala	Lys	Gly	Val	Ser	Tyr	Thr	Gln	Gly	Gln	Ser	Pro	Glu	Pro
		35					40					45			
Arg	Thr	Arg	Glu	Val	Phe	Leu	Leu	Arg	Gly	Pro	Pro	Gly	Pro	Ala	Phe
	50						55					60			
Pro	Gly														
65															

<210> 3753

<211> 1426

<212> DNA

<213> Homo sapiens

<400> 3753

nnaattcgga acaggtgcag taacttgcct aactttgccg cagctgcctc ccttctctcg
 60
 gaaccactc tcctaacca cccccgagag gcggagagaa tgtgggagca cttcagagag
 120
 gcctaggctc cggagatcgg gccatctggg ctctgaaagc aaattagttt tccaactcat
 180
 gtctggctcc ggcgttacc agacgcctgg aaggtccttc ctgcagtctg atcaccattt
 240
 ttctgctgc actgaccaat cagctccctt tggccttcaa cctcgggaat gatggattag
 300
 gggagtctag aaatggacga agccctagaa acgcagctga agacgagcag aggacgcttc
 360

tcggctacag aatccctccc caccttggag ctcttatctc aggtggacat ggactgcagg
 420
 gtccacatgc gacccatcgg cctgacgtgg gtgctgcaac tgaccttggc atggatcctg
 480
 ctagaagcct gtggagggag ccgcccactc caagccaggt ccagcaaca ccatgggctg
 540
 gcagctgac tgggcaaagg caagctgcac ctggcaggac cttgttgtcc ctcagagatg
 600
 gacacaacag agacatcggg ccctggaaac catccagaac gctgtggagt gccgagccct
 660
 gaatgcgaat ccttcctgga acacctccaa cgtgcccttc gcagtcgctt ccgcctgcgg
 720
 ctattggggg tacgccaggc acagccgctc tgcgaggagc tctgccaggc ctggttcgcc
 780
 aactgcgaag atgatatcac ctgcgggccg acttggtcc cactctcaga aaaaaggggc
 840
 tgtgagcca gctgccttac ctatggacag accttcgcag acgggacgga cttttgtcgc
 900
 tcggctctgg gccacgcct accggtggct gctcctggag cccgtcactg cttcaacatc
 960
 tccatctccg cggtagctcg tcccagacca ggacgacggg gccgggaagc tccctcccg
 1020
 cgttcccgca gccctgcac ctccatcctg gacgtgcgg gcagcgggag tggcagtggg
 1080
 agcggcagcg gcccctagcg gacgcgtggc cctgagttgg gggagcgacc cttccccag
 1140
 ccccgccct caggacaccc agaaccaccc ccctcgctct ctcggccttc tgtaatagtt
 1200
 ttgagatgtc tgtccctcct ccctggagct ccagagaccc acccctctcc aggttatccc
 1260
 agaaatgacc caactctctc acttttcct ctccccttg aataaagtcg ccagctaaaa
 1320
 aaaaagtcca tgtccacctg agataagagc tgttggctgg attggggggg ccacatgcga
 1380
 cccatcggcc tgacgtgggt gctgcaactg acctcggcat ggatcc
 1426

<210> 3754

<211> 261

<212> PRT

<213> Homo sapiens

<400> 3754

Met Asp Glu Ala Leu Glu Thr Gln Leu Lys Thr Ser Arg Gly Arg Phe
 1 5 10 15
 Ser Ala Thr Glu Ser Leu Pro Thr Leu Glu Leu Ser Gln Val Asp
 20 25 30
 Met Asp Cys Arg Val His Met Arg Pro Ile Gly Leu Thr Trp Val Leu
 35 40 45
 Gln Leu Thr Leu Ala Trp Ile Leu Leu Glu Ala Cys Gly Gly Ser Arg
 50 55 60
 Pro Leu Gln Ala Arg Ser Gln Gln His His Gly Leu Ala Ala Asp Leu
 65 70 75 80
 Gly Lys Gly Lys Leu His Leu Ala Gly Pro Cys Cys Pro Ser Glu Met

```
<210> 3755
<211> 3149
<212> DNA
<213> Homo sapiens
```

```

<400> 3755
atgaatctct gttccaaatg ctttgctgat tttcaaaaga aacagccaga cgatgattcc
60
gctccaagta caagtaacag ccaatcagat ttgttttccg aagagaccac cagtgacaac
120
aacaatacct cgataaccac gccaaactctt agtcccagcc agcagccgct tccgacagaa
180
ctgaatgtaa cttcaccgag taaagaggag tgtgggcat gcacagacac agctcatgtc
240
tcattaatca caccaacaaa aagatcctgt ggtacagatt cacagtctga gaatgaggct
300
tcaccagtaa aacggccacg actacttgag aatacggaa ggtccgagga aaccagtcga
360
tctaaacaga agagtcgacg tcggtgcttc cagtgccaaa ccaaactgga gctggtgcag
420
caggaattgg gatcgtgtcg ctgcggttat gtgttctgta tgttacatcg cctccccgag
480
cagcacgact gcacattcga ccacatgggc cgtggccggg aggaagccat catgaaaatg
540
gtgaagctgg accggaaagt ggggcgctcc tgccagcgca tcggggaggg gtgctcctga
600
aggccaggca tggccaccac gtgacgctgt tcttagttca ctaatgttag ccttatttag
660
gacaaagtca gccagacacc ttgtactggg cacgcgtcag actgcagcca gtccgtttcc
720

```

tttcttttagc cagccatcct ggtactgtag tttagggggt gatggtgggt gaaattgatt
780
tctggctgggt tactaagggt cctgctagcc attgtataaa attaaaacat gaagaatatt
840
ttttttttga gcatggctag tggattttaa acaacacata cctgtcactg ctggagtcaa
900
acttataaaa agccttaagt ggaaagtgtt ccagacggag actctgagtt aatagaggag
960
tagaagctgg tggttaaagtt cccacgacgc acatggcttt gccagaaact ctgtttaatg
1020
atcggccttt cacctcttca cttatcetta gtcccagtag ccaggatacc tgatggccac
1080
gtgtgccttg gccacgggag gctgctgaga ttggccacgt ggctgggctg ggtgggtggc
1140
tcactctccc acagagctgg aaatgggggg tgggggacag attcttacgg aaattttttt
1200
acctgacttg ctatgaaaaa actcatcaca caagaagaga aacagtaacc tcactttgaa
1260
aattagctcc actcaagact agtccacgaa cgagaccgc cttttctaca caggatccaa
1320
ggtcacgaga agcagccaga gtgccccgcc tccgccggct ctggtctgcc attcgccagt
1380
gcagggatct ggcacggacc agatgtggcg aatggcagca cagcgcggtg gctgggtctg
1440
cacactggcc tctgcagcca gatttctata ttgggagttt tttaaaaaga catttcatag
1500
ccaacaagaa tcagtagaag tgctgggagc agcagctggg gaagctgccg cccacgggct
1560
ctgccccttc cagctggagc cgcccgtgcc tccaggggcc aagaggatga tgtcgtggcc
1620
tccattctcg tttctatgca gcccatagt ccaaggacac ccagtccaca tctaccatat
1680
agcaagttta gtaaggaag gcagcatagc tcccaggac agtgggtttg gatctgtcta
1740
gaacagcggg ttgtggctgt ggcccagctc cgagagtgat atttgctctg gtaggtgagg
1800
gcctgagggt acatttctcc acctgtgccc cctcatgttc acagaggatt tcagcagctg
1860
caactgcgca cgccagggtg ggaagggtgg ggggtggcct ggttgcccca tgttaggaaa
1920
tcactaccag tcaggtgggg ctggggctgg gtggacagga tcaggattcc cttgaaagcc
1980
caggcagggt gagcagtcce agtggctcta gtgccgcac agatccagggt ggggtgaggc
2040
aggaggcccc tgcggaggca gcgtggatct gccacacat aggctactgg aatagtttaa
2100
cccagcaact ttctttttta taaaacaaca aatggttcaa ctctgtctgc aaattaacag
2160
ctgaacacct gcaactgcaa atgttttttg atccgacgta ctgaaatagg aagtcatgct
2220
cttcccaccc tccaccaccc agagtggaaac ccgctgcaaa atccccagcc ttaattcttg
2280
cttcaggacc cagaccggtg tcttgcctta gggcaacca gggcagaggg gccaggctctg
2340

cccagcgttt accactgctg tcaagccaca gcccttggcc accatacggg ccatectcag
 2400
 tgaggcagcc ccccataggc ttccgccaag ctctgggtccc gaagaggctg tgcgagccct
 2460
 tcccggccct cccaggggcc ccccgccccc tcctctgcct gctgctgga ggcagccatg
 2520
 ggaaggagcc caggggagct ggccctggggg agcgaagccc atgttcgctt cctgacttag
 2580
 agctgggggg ggtggggggg ggggcttggt cccctgcagt atctgttctg tgaagtttgt
 2640
 taaatgtaag gaaagcttaa attcttgat ctttaaaaga gaaaatctta ttaaccctt
 2700
 ttgtgttcta gatttactta cacacatagc ctagagctca gttttagttt taacattgtg
 2760
 aaaatattaa aagaatcttg taactttatt cttttttctc ctgctgaaaa aaaaaattaa
 2820
 accaatcgta tgaaagtttg gttttcttgt ttcacccctt ctctaagtg cccctgggt
 2880
 tgctgggaaa actgacccat ctccctggcc agggctggaa agagatgggg gcctgtgtgc
 2940
 agagaccgtc tgcagtactt ggaggcactc gtccagttag tgtccaggct aaacagccgc
 3000
 ttccctgctt tctgttggga gcctctgccc tgggaagctg cgggactggc cttggggtaa
 3060
 aggtgggtct gcagggccaa gcctgtgcca gcagccagga ggttacacac tgggggggat
 3120
 cagaaaacga gccccagccc tgagggcc
 3149

<210> 3756

<211> 199

<212> PRT

<213> Homo sapiens

<400> 3756

Met	Asn	Leu	Cys	Ser	Lys	Cys	Phe	Ala	Asp	Phe	Gln	Lys	Lys	Gln	Pro
1			5						10					15	
Asp	Asp	Asp	Ser	Ala	Pro	Ser	Thr	Ser	Asn	Ser	Gln	Ser	Asp	Leu	Phe
			20					25					30		
Ser	Glu	Glu	Thr	Thr	Ser	Asp	Asn	Asn	Thr	Ser	Ile	Thr	Thr	Pro	
			35				40					45			
Thr	Leu	Ser	Pro	Ser	Gln	Gln	Pro	Leu	Pro	Thr	Glu	Leu	Asn	Val	Thr
			50			55					60				
Ser	Pro	Ser	Lys	Glu	Glu	Cys	Gly	Pro	Cys	Thr	Asp	Thr	Ala	His	Val
				70						75				80	
Ser	Leu	Ile	Thr	Pro	Thr	Lys	Arg	Ser	Cys	Gly	Thr	Asp	Ser	Gln	Ser
				85					90					95	
Glu	Asn	Glu	Ala	Ser	Pro	Val	Lys	Arg	Pro	Arg	Leu	Leu	Glu	Asn	Thr
			100					105					110		
Glu	Arg	Ser	Glu	Glu	Thr	Ser	Arg	Ser	Lys	Gln	Lys	Ser	Arg	Arg	Arg
			115				120					125			
Cys	Phe	Gln	Cys	Gln	Thr	Lys	Leu	Glu	Leu	Val	Gln	Gln	Glu	Leu	Gly
			130			135					140				
Ser	Cys	Arg	Cys	Gly	Tyr	Val	Phe	Cys	Met	Leu	His	Arg	Leu	Pro	Glu

145		150		155		160									
Gln	His	Asp	Cys	Thr	Phe	Asp	His	Met	Gly	Arg	Gly	Arg	Glu	Glu	Ala
		165		170		175									
Ile	Met	Lys	Met	Val	Lys	Leu	Asp	Arg	Lys	Val	Gly	Arg	Ser	Cys	Gln
		180		185		190									
Arg	Ile	Gly	Glu	Gly	Cys	Ser									
		195													

<210> 3757

<211> 1046

<212> DNA

<213> Homo sapiens

<400> 3757

```

nnacgcgtag cctcgccggg aagccaggcg tcgttcctcc ggtccatctc gtcacatgctc
60
agggcggtgg ccaccagca gcgcggcgcc gtgttcgtgg acaaggagaa cctcaccatg
120
ccgggcctca ggttcgacaa catccaggga gatgcagtta aagacttgat gcttcgcttt
180
ctgggtgaaa aagctgcagc aaagagacaa gtcctaaatg ccgactcagt ggaacaatct
240
tttgttgat tgaaacagct aatccgttga caaatggcat gcccctccgt gccgtcagca
300
cactgacctt gtcaccatta ctaacggctg gctggcgctg cttccagcaa gagctgcaga
360
aactggaggg cagcagtgga cctgtgcgga cgtctcctca cagcccacgg ccagggctac
420
ggcaagagcg ggctgctcac cagccacacg acagattcac tgcagctctg gtttgtcagg
480
ctggcactac tagtgaagtt gggccttttc cagaatgctg agatggaatt tgaacccttc
540
ggaaatcttg atcagccaga tctttattcc gagtactacc cgcacgtgta ccctggggcg
600
aggggctcca tgggtcccctt ctcgatgcgc atcttgacag cggagcttca gcagtacctg
660
gggaaccac aggagtcgct ggatagactg cacaagggtga agactgtctg cagcaaggta
720
gggtggcgctg tcattcttcc ctgccacggg gagaacatgc cctccacgcc ctccccacag
780
gacatgcccg tgctgttccc tgcccgtcct gcccacatgca ccacgctgc ttctgccttc
840
agaaggctag gtgacccagg tttgtgtggc ctggtagtcg tggctcttgc tgaaatcttt
900
tttagggatg gtaagagttt ctagcagagc ttgagtcctg taattcttac tgccgtgtac
960
tatgggaagc tgaaaggcag agacatcttt cttgccaagg ctgccagctg aagcttcaag
1020
gtcagtgtgc cagccccccc tgggtgt
1046

```

<210> 3758

<211> 199

<212> PRT

<213> Homo sapiens

<400> 3758

```

Arg Leu Ala Gly Ala Ala Ser Ser Lys Ser Cys Arg Asn Trp Arg Ala
 1           5           10           15
Ala Val Asp Leu Cys Gly Arg Leu Leu Thr Ala His Gly Gln Gly Tyr
          20           25           30
Gly Lys Ser Gly Leu Leu Thr Ser His Thr Thr Asp Ser Leu Gln Leu
          35           40           45
Trp Phe Val Arg Leu Ala Leu Leu Val Lys Leu Gly Leu Phe Gln Asn
          50           55           60
Ala Glu Met Glu Phe Glu Pro Phe Gly Asn Leu Asp Gln Pro Asp Leu
65           70           75           80
Tyr Ser Glu Tyr Tyr Pro His Val Tyr Pro Gly Arg Arg Gly Ser Met
          85           90           95
Val Pro Phe Ser Met Arg Ile Leu His Ala Glu Leu Gln Gln Tyr Leu
          100          105          110
Gly Asn Pro Gln Glu Ser Leu Asp Arg Leu His Lys Val Lys Thr Val
          115          120          125
Cys Ser Lys Val Gly Gly Ala Val Ile Leu Pro Cys His Gly Glu Asn
          130          135          140
Met Pro Ser Thr Pro Ser Pro Gln Asp Met Pro Val Leu Phe Pro Ala
145          150          155          160
Arg Pro Ala Pro Cys Thr Ile Ala Ala Ser Ala Phe Arg Arg Leu Gly
          165          170          175
Asp Pro Gly Leu Cys Gly Leu Val Val Ala Leu Ala Glu Ile Phe
          180          185          190
Phe Arg Asp Gly Lys Ser Phe
          195

```

<210> 3759

<211> 830

<212> DNA

<213> Homo sapiens

<400> 3759

```

ngtcgaatat ccatgcagac tagatacggtt ctttaagaaac agcaataaag ctctctatgg
60
tctcatccag aagtgtaaaa acagatatag tgccttcaac taccgggcaa caggagaaga
120
agagcaaagg caggcggacg agctcctgga aaaaattgag agcatggtgc atcagaatgg
180
gaacaagcat tgtgttttca gagaaaaaga aaccctgaac attgtccttg tggggagaag
240
cgggactggg aagagtgcga ccgggaactc tatcctgggg agcctcgtct tcacctctcg
300
gctccggggc cagccagtca ccaagaccag ccagagtggc aggaggacat gggacggaca
360
ggaggtggtg gttgtggaca cccttccttc aaccagatgc tggatgtcaa aggacccatc
420
ccgggttaaaa gaggaggtca agcgctgttt gtcctgctgt gaaaaagggg acacattttt
480
gtcctggtgt tccagctggg acgattcact gaagaggaca aaacagctgt ggcgaaactg
540

```

gaggccatct ttggagcaga ctttacgaaa tacgcgatta tgctgttcac ccggaaggaa
 600
 gacctagggg cggggaattt ggaagacttc atgaagaact cagataacaa agcccttcgg
 660
 cgcattttta aaaagtgggg ggggagagtt tgtgctttta acaacaaaga aacaggccag
 720
 gcccaggaaa cccaggtgaa agctctttta acaaaggcca atgatctgag aaaagaaagt
 780
 ggggtggtccg ggtatcccca tacacaggag aacgtcagcc cttcacgcgt
 830

<210> 3760

<211> 100

<212> PRT

<213> Homo sapiens

<400> 3760

Glu	His	Gly	Ala	Ser	Glu	Trp	Glu	Gln	Ala	Leu	Cys	Phe	Gln	Arg	Lys
1				5				10					15		
Arg	Asn	Pro	Glu	His	Cys	Pro	Cys	Gly	Glu	Lys	Arg	Asp	Trp	Glu	Glu
		20						25					30		
Cys	Asp	Arg	Glu	Leu	Tyr	Pro	Gly	Glu	Pro	Arg	Leu	His	Leu	Ser	Ala
		35					40					45			
Pro	Gly	Pro	Ala	Ser	His	Gln	Asp	Gln	Pro	Glu	Trp	Gln	Glu	Asp	Met
		50				55					60				
Gly	Arg	Thr	Gly	Gly	Gly	Gly	Cys	Gly	His	Pro	Ser	Phe	Asn	Gln	Met
65					70				75					80	
Leu	Asp	Val	Lys	Gly	Pro	Ile	Pro	Val	Lys	Arg	Gly	Gly	Gln	Ala	Leu
				85				90						95	
Phe	Val	Leu	Leu												
															100

<210> 3761

<211> 458

<212> DNA

<213> Homo sapiens

<400> 3761

acgcgtgcag gtggcaccga gcgccctcag gtgcgtaccc cgcccccgcc gccgacgcgc
 60
 ccgacgccgc cattaagggc gggttgcctt tcggaacgtc ctctctctga gggcctgggg
 120
 aaggagggcc gcccgggccgc agcgggaggt ggcccccccg gacaccccg cgccccgagg
 180
 cgaggcaccc ccgaaccccg atccctgctg gcaggaccag aggtgtgagg gtggggggcg
 240
 ggaagccttg ccgcgggggc aatggtcgta cgcacggagc gcacatccct ctcttctctg
 300
 attggccgag cgggggtgtg cgtgatgccg cgctccgccc gtcgtacgtg gggcgctcgc
 360
 gctgcgtgca gacgcgcttg attgggttaga taagggggcg ggggcccgcg ctgttaccag
 420
 gcaactgcgc cccggatccg ccccctgacg tcacgcgt
 458

<210> 3762
 <211> 75
 <212> PRT
 <213> Homo sapiens

<400> 3762
 Thr Arg Ala Gly Gly Thr Gln Arg Pro Gln Val Arg Thr Pro Pro Pro
 1 5 10 15
 Pro Pro Thr Pro Pro Thr Pro Pro Leu Arg Ala Gly Cys Leu Ser Glu
 20 25 30
 Arg Pro Pro Pro Glu Gly Leu Gly Lys Gly Gly Arg Pro Ala Ala Ala
 35 40 45
 Gly Gly Gly Pro Pro Gly His Pro Gly Ala Pro Arg Arg Gly Thr Pro
 50 55 60
 Glu Pro Arg Ser Leu Leu Ala Gly Pro Glu Val
 65 70 75

<210> 3763
 <211> 1340
 <212> DNA
 <213> Homo sapiens

<400> 3763
 nnggcgtccg ctctctcccc tcgcgggtcgg tagagctggc tgcgccgagc cccctgcacg
 60
 ctgcacatgg ggcgcctgac ggaagcggcg gcagcgggca gcggctctcg ggctgcaggc
 120
 tgggcagggt cccctccac gctcctgccg ctgtctccca cgtccccag gtgcgcggcc
 180
 accatggcgt ccagcgacga ggacggcacc aacggcggcg cctcggaggc cggcgaggac
 240
 cgggaggctc ccggcaagcg gaggcgcctg gggttcttgg ccaccgcctg gctcaccttc
 300
 tacgacatcg ccatgaccgc ggggtggttg gttctagcta ttgccatggt acgtttttat
 360
 atggaaaagg gaacacacag agggttatat aaaagtattc agaagacact taaatttttc
 420
 cagacatttg ccttgcttga gatagttcac tgtttaattg gaattgtacc tacttctgtg
 480
 attgtgactg ggggtccaagt gagctcaaga atctttatgg tgtggctcat tactcacagt
 540
 ataaaaccaa tccagaatga agagagtgtg gtgctttttc tggtcgcgtg gactgtgaca
 600
 gagatcactc gctattcctt ctacacattc agccttcttg accacttgcc atacttcatt
 660
 aaatgggcca gatataattt ttttatcatc ttatatcctg ttggagttgc tgggtgaactt
 720
 cttacaatat acgtgcctt gccgtatgtg aagaaaacag gaatgttttc aataagactt
 780
 cctaacaat acaatgtctc ttttgactac tattattttc ttcttataac catggcatca
 840
 tatatacctt tgtttccaca actctatttt catatgttac gtcaaagaag aaagggtgctt
 900

catggagagg tgattgtaga aaaggatgat taaatgatct ctgcaaaca ggtgcttttt
 960
 ccagaataac caagattacc tgagtccaag ttttaataac aagaataaac aactttgtga
 1020
 aatatcatgg attgtatggg ttcttaaaat ataacttgag acacgtggta tttgccagta
 1080
 tttgtgttcc tcttgtgcca gatctatttt ttacaagaac tgtgccaata tcagtaactt
 1140
 ttgggtaggt attgattatt aggaaaataa ttaggtgtat tatctggggg aaaaaaaaaac
 1200
 ttttgctaag ttttttttga aacatgctca aagcttttta aatcaatatt tagaaattag
 1260
 tttaatgatt tactattata cctgctagtg atatttatgt gatatttaca aatgaaaatt
 1320
 aatgcaaaat ttttaacaaa
 1340

<210> 3764

<211> 288

<212> PRT

<213> Homo sapiens

<400> 3764

Met	Gly	Arg	Leu	Thr	Glu	Ala	Ala	Ala	Ala	Gly	Ser	Gly	Ser	Arg	Ala
1				5					10					15	
Ala	Gly	Trp	Ala	Gly	Ser	Pro	Pro	Thr	Leu	Leu	Pro	Leu	Ser	Pro	Thr
			20					25					30		
Ser	Pro	Arg	Cys	Ala	Ala	Thr	Met	Ala	Ser	Ser	Asp	Glu	Asp	Gly	Thr
		35					40					45			
Asn	Gly	Gly	Ala	Ser	Glu	Ala	Gly	Glu	Asp	Arg	Glu	Ala	Pro	Gly	Lys
	50					55					60				
Arg	Arg	Arg	Leu	Gly	Phe	Leu	Ala	Thr	Ala	Trp	Leu	Thr	Phe	Tyr	Asp
65					70					75				80	
Ile	Ala	Met	Thr	Ala	Gly	Trp	Leu	Val	Leu	Ala	Ile	Ala	Met	Val	Arg
			85						90					95	
Phe	Tyr	Met	Glu	Lys	Gly	Thr	His	Arg	Gly	Leu	Tyr	Lys	Ser	Ile	Gln
		100						105					110		
Lys	Thr	Leu	Lys	Phe	Phe	Gln	Thr	Phe	Ala	Leu	Leu	Glu	Ile	Val	His
	115						120					125			
Cys	Leu	Ile	Gly	Ile	Val	Pro	Thr	Ser	Val	Ile	Val	Thr	Gly	Val	Gln
	130					135					140				
Val	Ser	Ser	Arg	Ile	Phe	Met	Val	Trp	Leu	Ile	Thr	His	Ser	Ile	Lys
145					150					155					160
Pro	Ile	Gln	Asn	Glu	Glu	Ser	Val	Val	Leu	Phe	Leu	Val	Ala	Trp	Thr
			165						170					175	
Val	Thr	Glu	Ile	Thr	Arg	Tyr	Ser	Phe	Tyr	Thr	Phe	Ser	Leu	Leu	Asp
		180						185					190		
His	Leu	Pro	Tyr	Phe	Ile	Lys	Trp	Ala	Arg	Tyr	Asn	Phe	Phe	Ile	Ile
	195						200					205			
Leu	Tyr	Pro	Val	Gly	Val	Ala	Gly	Glu	Leu	Leu	Thr	Ile	Tyr	Ala	Ala
	210					215					220				
Leu	Pro	Tyr	Val	Lys	Lys	Thr	Gly	Met	Phe	Ser	Ile	Arg	Leu	Pro	Asn
225					230					235				240	
Lys	Tyr	Asn	Val	Ser	Phe	Asp	Tyr	Tyr	Tyr	Phe	Leu	Leu	Ile	Thr	Met

				245					250					255					
Ala	Ser	Tyr	Ile	Pro	Leu	Phe	Pro	Gln	Leu	Tyr	Phe	His	Met	Leu	Arg				
			260						265					270					
Gln	Arg	Arg	Lys	Val	Leu	His	Gly	Glu	Val	Ile	Val	Glu	Lys	Asp	Asp				
			275				280						285						

<210> 3765

<211> 2764

<212> DNA

<213> Homo sapiens

<400> 3765

```

ngagtggctg ttgagcggcg ccgcgggagt tccgcagggt tcccgtgttc gcagcggagc
60
cggaggccag ctgaaccg cggtgggatc ccgatagga ggaggagggg acccatagga
120
cgcgtaaca tggacctgga aaacaaagtg aagaagatgg gcttaggtca cgagcaagga
180
tttgagccc cttgtttaaa atgcaaagaa aaatgtgaag gattcgaact gcacttctgg
240
agaaaaatat gtcgtaactg caagtgtggc caagaagagc atgatgtcct cttgagcaat
300
gaagaggatc gaaaagtggg aaaacttttt gaagacacca agtataccac tctgattgca
360
aaactaaagt cagatggaat tcccatgtat aaacgcaatg ttatgatatt gacgaatcca
420
gttgctgcca agaagaatgt ctccatcaat acagttacct atgagtgggc tcctcctgtc
480
cagaatcaag cattggccag gcagtacatg cagatgctac ccaaggaaaa gcagccagta
540
gcaggctcag agggggcaca gtaccggaag aagcagctgg caaagcagct ccctgcacat
600
gaccaggacc cttcaaagtg ccatgagttg tctcccagag aggtgaagga gatggagcag
660
tttgtgaaga aatataagag cgaagctctg ggagtaggag atgtcaaact tccctgtgag
720
atggatgccc aaggcccca acaaatgaac attcctggag gggatagaag caccacagca
780
gcagtggggg ccatggagga caaatctgct gagcacaaaa gaactcaata ttctgctat
840
tgctgcaaac tgagtatgaa agaaggtgac ccagccatct atgccgaaag ggctggctat
900
gataaactgt ggcaccagc ttgttttgtc tgcagcacct gccatgaact cctgggtgac
960
atgatttatt tttggaagaa tgagaagcta tactgtggca gacattactg tgacagcgag
1020
aaaccccgat gtgctggctg tgacgagctg atattcagca atgagtatac ccaggcagaa
1080
aaccagaatt ggcacctgaa acacttctgc tgctttgact gtgatagcat tctagctggg
1140
gagatatacg tgatggtcaa tgacaagccc gtgtgcaagc cctgctatgt gaagaatcac
1200
gctgtggtgt gtcaaggatg ccacaatgcc atcgaccag aagtgcagcg ggtgacctat
1260

```

aacaatttca gctggcatgc atccacagag tgctttctgt gctcttgctg cagcaaagtc
1320
ctcattgggc agaagttcat gccagtagaa gggatggttt tctgttcagt ggaatgtaag
1380
aagaggatgt ctaggagga gggcaccag aagtatcgag ccatagctat ccaaagtggc
1440
ctgcatttct actgtaaaat gcaatttgaa aaaaataaaa cgcaaaaaaa gaaactgtaa
1500
aggaaaccaa gagattttgt ttaatttttt tggccatttt ttcttcatca attttttttc
1560
ggtctcaact tttaaacttg gtttaagcat ttgatttgta aaacagtaaa taattgtatc
1620
tttccatagc ttttcaaagc tgaaatcatt tttggaagct tggatctcat taaacttcat
1680
gtctctatcc catttgtgcc acacacttaa aagttagtgt actgaatgga aagatgagca
1740
ttcctagtcc tacacttctt ttttccccct catgtgtaaa atgaaaagaa aactaaattt
1800
gccctaatac caaggcgcta cgtttattgc ctctgtctat tctactgacct ttgtaatgat
1860
acacagtga ttttttttga caaagagaaa tgcagtgtag tatgcagagc tgctgtttta
1920
atgccctatg catttactct ttcctgattt aggcagaggt ggcattttct ttattgcatt
1980
tctctatttt tttaatgtac cctaccttca gtattctctt tgtaagttgg tgacttgcat
2040
ctgtggcctt gaatatttta ttatcacatg tggcataaca gtatccacac tttttagttc
2100
tttatttttt tttttttatt ttgagcaatt ctctgcctc agcctcccaa atagctggga
2160
ttacaggtgc atgccaccac acccagctaa tttttgtatt tttagtagag acaggttttc
2220
accatgttag ccaggctggc ctcaaactcc tgacctcaga tgatccgcct gccttggcct
2280
cccaaagtgc tgggattaca ggtgtgggag ccaccatgcc tgaccacac actttttact
2340
tgtatagatg atttttggct tggacataaa agccaagcca cccatttgct tttaatccaa
2400
agaacatgta tagtttttgt acccagagac tatgatttat attgattgca cttgcctgcc
2460
atgatttaga taagattttt tttgcatggt ttttattctt tcctaagga tcctgtttta
2520
taatacttcc aagcctgtcc atggatatat caaatgtctt cacttgata ttttcatggc
2580
taggtatttc taatgtttat tcttccctgt gtacttctac acatagctat gcactatgaa
2640
aattaaatgg aatgaatgat atgtatatta ctcatccat ttaattttca tagtgcatg
2700
ctatgaaaat taaatggaat gaatgatag tatattactc aaaataaagt ttttttact
2760
ttaa
2764

<210> 3766

<211> 464

<212> PRT

<213> Homo sapiens

<400> 3766

```

Xaa Val Ala Val Glu Arg Arg Arg Gly Ser Ser Ala Gly Phe Pro Cys
 1          5          10          15
Ser Gln Arg Ser Arg Arg Pro Ala Glu Pro Gly Arg Gly Ile Pro Asp
          20          25          30
Arg Arg Arg Arg Gly Pro Ile Gly Arg Val Asn Met Asp Leu Glu Asn
          35          40          45
Lys Val Lys Lys Met Gly Leu Gly His Glu Gln Gly Phe Gly Ala Pro
          50          55          60
Cys Leu Lys Cys Lys Glu Lys Cys Glu Gly Phe Glu Leu His Phe Trp
          65          70          75          80
Arg Lys Ile Cys Arg Asn Cys Lys Cys Gly Gln Glu Glu His Asp Val
          85          90          95
Leu Leu Ser Asn Glu Glu Asp Arg Lys Val Gly Lys Leu Phe Glu Asp
          100          105          110
Thr Lys Tyr Thr Thr Leu Ile Ala Lys Leu Lys Ser Asp Gly Ile Pro
          115          120          125
Met Tyr Lys Arg Asn Val Met Ile Leu Thr Asn Pro Val Ala Ala Lys
          130          135          140
Lys Asn Val Ser Ile Asn Thr Val Thr Tyr Glu Trp Ala Pro Pro Val
          145          150          155          160
Gln Asn Gln Ala Leu Ala Arg Gln Tyr Met Gln Met Leu Pro Lys Glu
          165          170          175
Lys Gln Pro Val Ala Gly Ser Glu Gly Ala Gln Tyr Arg Lys Lys Gln
          180          185          190
Leu Ala Lys Gln Leu Pro Ala His Asp Gln Asp Pro Ser Lys Cys His
          195          200          205
Glu Leu Ser Pro Arg Glu Val Lys Glu Met Glu Gln Phe Val Lys Lys
          210          215          220
Tyr Lys Ser Glu Ala Leu Gly Val Gly Asp Val Lys Leu Pro Cys Glu
          225          230          235          240
Met Asp Ala Gln Gly Pro Lys Gln Met Asn Ile Pro Gly Gly Asp Arg
          245          250          255
Ser Thr Pro Ala Ala Val Gly Ala Met Glu Asp Lys Ser Ala Glu His
          260          265          270
Lys Arg Thr Gln Tyr Ser Cys Tyr Cys Cys Lys Leu Ser Met Lys Glu
          275          280          285
Gly Asp Pro Ala Ile Tyr Ala Glu Arg Ala Gly Tyr Asp Lys Leu Trp
          290          295          300
His Pro Ala Cys Phe Val Cys Ser Thr Cys His Glu Leu Leu Val Asp
          305          310          315          320
Met Ile Tyr Phe Trp Lys Asn Glu Lys Leu Tyr Cys Gly Arg His Tyr
          325          330          335
Cys Asp Ser Glu Lys Pro Arg Cys Ala Gly Cys Asp Glu Leu Ile Phe
          340          345          350
Ser Asn Glu Tyr Thr Gln Ala Glu Asn Gln Asn Trp His Leu Lys His
          355          360          365
Phe Cys Cys Phe Asp Cys Asp Ser Ile Leu Ala Gly Glu Ile Tyr Val
          370          375          380
Met Val Asn Asp Lys Pro Val Cys Lys Pro Cys Tyr Val Lys Asn His

```

385		390		395		400									
Ala	Val	Val	Cys	Gln	Gly	Cys	His	Asn	Ala	Ile	Asp	Pro	Glu	Val	Gln
				405					410					415	
Arg	Val	Thr	Tyr	Asn	Asn	Phe	Ser	Trp	His	Ala	Ser	Thr	Glu	Cys	Phe
				420				425					430		
Leu	Cys	Ser	Cys	Cys	Ser	Lys	Cys	Leu	Ile	Gly	Gln	Lys	Phe	Met	Pro
		435				440					445				
Val	Glu	Gly	Met	Val	Phe	Cys	Ser	Val	Glu	Cys	Lys	Lys	Arg	Met	Ser
	450					455					460				

<210> 3767

<211> 2439

<212> DNA

<213> Homo sapiens

<400> 3767

```

nttttttta tagtttaatg tattttaata gcaagtata taccacgagg agcaaattggc
60
acatggaccc tccgtccttg ggggtggacag aaccaactgc tcctgtcact gtttcttacc
120
gggcccagac acgccccaga gcccgcaca ggccagttgc tactgccagt cgtgaggcga
180
acccacctgc tgacccaaag ccatgccggt tccaccatga gactgagtgt gggcacttgt
240
gagcgtgctt ctggggcgca caggcgtcct gacggggcca agtgagaatt ccagtgcgcc
300
agtatatgat atacaatata attaggagag aaagaagcag gatatgaaaa catacttttt
360
gttattggca tgaaaggcca tggctcctgtc catgtcccca gactgtgata agccagggtta
420
aactccagca cctgaaagggt gttctcacct gcagtgaatc tgtcgtgtgg ctggtgagca
480
gccgctctt gccgtagccc tggccgtggg ctgtgaggag acgtccgcac aggtccactg
540
ctgcctcca gtttctgcag ctgattagct gtttcaatcc aacaaaagat tgttccactg
600
agtgggcatt taggacttgt ctctttgctg cagctttttc acccagaaag cgaagcatca
660
agtctttaac tgcattctcc tggatgttgt cgaacctgag gcccgcatg gtgaggttct
720
ccttgctcac gaacacggcg ccgcgtgct ggggtggccac ggcccgcagg gcccaggca
780
gctgcgcccc cggcgtegcc agagcctttc gcgcacatcc aggcagtgtt tgcaggaggat
840
gacgacctt ttgccaccgc cctgagcatg ggcgagatgg accggaggaa cgacgcctgg
900
cttcccggcg aggctacgcg tggagtctctg cgggccgtgg ccaccagca gcgcggcgcc
960
gtgttcgtgg acaaggagaa cctcaccatg ccgggcctca ggttcgacaa catccaggga
1020
gatgcagtta aagacttgat gcttcgcttt ctgggtgaaa aagctgcagc aaagagacaa
1080
gtcctaaatg ccgactcagt ggaacaatct tttgttgat tgaaacagct aatcagctgc
1140

```


agaaactgga gggcagcagt ggacctgtgc ggacgtctcc tcacagccca cggccagggc
 1200
 tacggcaaga ggggctgct caccagccac acgacagatt cactgcagct ctggtttgtc
 1260
 aggctggcac tactagtga gttgggcctt ttccagaatg ctgagatgga atttgaaccc
 1320
 ttcggaaatc ttgatcagcc agatctttat tacgagtact acccgcacgt gtaccctggg
 1380
 cgcaggggct ccatgggtccc cttctcgatg cgcattcttg acgcggagct tcagcagtac
 1440
 ctggggaacc cacaggagtc gctggataga ctgcacaagg tgaagactgt ctgcagcaag
 1500
 atcctggcca atttggagca aggcttagca gaagacggcg gcatgagcag cgtgactcag
 1560
 gagggcagac aagcctctat ccggctgtgg aggtcacgtc tgggccgggt gatgtactcc
 1620
 atggcaaact gtctgtcct gatgaaggat tatgtgctgg ccgtggaggc gtatcattcg
 1680
 gttatcaagt attaccaga gcaagagccc cagctgctca gcggcatcgg ccggatttcc
 1740
 ctccagattg gagacataaa aacagctgaa aagtattttc aagacgttga gaaagtaaca
 1800
 cagaaattag atggactaca gggtaaaatc atggttttga tgaacagcgc gttccttcac
 1860
 ctcgggcaga ataactttgc agaagccac aggttcttca cagagatctt aaggatggat
 1920
 ccaagaaacg cagtggccaa caacaacgct gccgtgtgtc tgctctacct gggcaagctc
 1980
 aaggactccc tgcggcagct ggaggccatg gtccagcagg accccaggca ctacctgcac
 2040
 gagagcgtgc tcttcaacct gaccaccatg tacgagctgg agtcctcacg gagcatgcag
 2100
 aagaaacagg ccctgctgga ggctgtcgcc ggcaaggagg gggacagctt caacacacag
 2160
 tgctcaagc tggcctagct gcctccaaca cactacgtca gaaggaccg ggtctttgaa
 2220
 actgtgtctt gaagctaag tattaatgtg acatggagga actcaataaa actccttttc
 2280
 tctttanttt tctaaagttt gactatgctg tgtcttattt tacatttctg tagatttatt
 2340
 gtgtttttta ttcactcagc ttcaatctgt atgtttatgt ctttcaccaa attggaaagt
 2400
 ttttcacttt gattatttga ttttatattg ctttgatca
 2439

<210> 3768

<211> 379

<212> PRT

<213> Homo sapiens

<400> 3768

Met	Leu	Arg	Phe	Leu	Gly	Glu	Lys	Ala	Ala	Ala	Lys	Arg	Gln	Val	Leu
1				5				10					15		
Asn	Ala	Asp	Ser	Val	Glu	Gln	Ser	Phe	Val	Gly	Leu	Lys	Gln	Leu	Ile

			20					25					30			
Ser	Cys	Arg	Asn	Trp	Arg	Ala	Ala	Val	Asp	Leu	Cys	Gly	Arg	Leu	Leu	
		35					40					45				
Thr	Ala	His	Gly	Gln	Gly	Tyr	Gly	Lys	Ser	Gly	Leu	Leu	Thr	Ser	His	
	50					55					60					
Thr	Thr	Asp	Ser	Leu	Gln	Leu	Trp	Phe	Val	Arg	Leu	Ala	Leu	Leu	Val	
65					70					75					80	
Lys	Leu	Gly	Leu	Phe	Gln	Asn	Ala	Glu	Met	Glu	Phe	Glu	Pro	Phe	Gly	
				85					90					95		
Asn	Leu	Asp	Gln	Pro	Asp	Leu	Tyr	Tyr	Glu	Tyr	Tyr	Pro	His	Val	Tyr	
			100					105					110			
Pro	Gly	Arg	Arg	Gly	Ser	Met	Val	Pro	Phe	Ser	Met	Arg	Ile	Leu	His	
		115					120					125				
Ala	Glu	Leu	Gln	Gln	Tyr	Leu	Gly	Asn	Pro	Gln	Glu	Ser	Leu	Asp	Arg	
	130					135					140					
Leu	His	Lys	Val	Lys	Thr	Val	Cys	Ser	Lys	Ile	Leu	Ala	Asn	Leu	Glu	
145					150					155					160	
Gln	Gly	Leu	Ala	Glu	Asp	Gly	Gly	Met	Ser	Ser	Val	Thr	Gln	Glu	Gly	
				165					170					175		
Arg	Gln	Ala	Ser	Ile	Arg	Leu	Trp	Arg	Ser	Arg	Leu	Gly	Arg	Val	Met	
			180					185					190			
Tyr	Ser	Met	Ala	Asn	Cys	Leu	Leu	Leu	Met	Lys	Asp	Tyr	Val	Leu	Ala	
		195					200					205				
Val	Glu	Ala	Tyr	His	Ser	Val	Ile	Lys	Tyr	Tyr	Pro	Glu	Gln	Glu	Pro	
	210					215					220					
Gln	Leu	Leu	Ser	Gly	Ile	Gly	Arg	Ile	Ser	Leu	Gln	Ile	Gly	Asp	Ile	
225				230						235				240		
Lys	Thr	Ala	Glu	Lys	Tyr	Phe	Gln	Asp	Val	Glu	Lys	Val	Thr	Gln	Lys	
				245					250					255		
Leu	Asp	Gly	Leu	Gln	Gly	Lys	Ile	Met	Val	Leu	Met	Asn	Ser	Ala	Phe	
			260					265					270			
Leu	His	Leu	Gly	Gln	Asn	Asn	Phe	Ala	Glu	Ala	His	Arg	Phe	Phe	Thr	
		275					280					285				
Glu	Ile	Leu	Arg	Met	Asp	Pro	Arg	Asn	Ala	Val	Ala	Asn	Asn	Asn	Ala	
	290					295					300					
Ala	Val	Cys	Leu	Leu	Tyr	Leu	Gly	Lys	Leu	Lys	Asp	Ser	Leu	Arg	Gln	
305					310					315					320	
Leu	Glu	Ala	Met	Val	Gln	Gln	Asp	Pro	Arg	His	Tyr	Leu	His	Glu	Ser	
				325					330					335		
Val	Leu	Phe	Asn	Leu	Thr	Thr	Met	Tyr	Glu	Leu	Glu	Ser	Ser	Arg	Ser	
			340					345					350			
Met	Gln	Lys	Lys	Gln	Ala	Leu	Leu	Glu	Ala	Val	Ala	Gly	Lys	Glu	Gly	
		355					360					365				
Asp	Ser	Phe	Asn	Thr	Gln	Cys	Leu	Lys	Leu	Ala						
	370					375										

<210> 3769

<211> 1931

<212> DNA

<213> Homo sapiens

<400> 3769

nacgcgtgta cgtcatggag gatatacat tcaacgtgaa ggttgcttca ggtgaatgca
60

atgaagacac tgaagtttac aacatcaccc tgtgtactgg ggatgaactc actctaattg
120
ggcaggcaga aatcctttat gcaaagacat tcaaggaaaa gtcacgactc aacacaatct
180
tcaaaaagat tgggaagctc aattccatca gcaagctggg aaaaggcaaa atgccgtgcc
240
tcatttgtat gaatcacccg accaacgaaa gcattagcct tccattccag tgcaagggca
300
gatttagcac ccgaagtccc ctggaacttc agatgcaaga gggcgaacac accatccgca
360
acattgtgga gaaaaccagg ctctctgtga atgtgactgt gccaaagcct ccaccgagaa
420
accatacga cctccacttc atccgtgagg ggcaccgcta taagtttgtg agcatccaga
480
ccaagacggt ggtggtttgc tgtgtgctgc ggaacaacaa gatcctcccc atgcacttcc
540
ctttgcactt gactgtcccc aagttcagcc tcccagaacc cctggtgaag ggagagagct
600
ggcccgaac cctggtccca tcccgggcta ggtatctgcc aagaacagtt cgacatcgat
660
gagtattcac gggctgtccg tgatgtgaaa accgactgga atgaagaatg caagagcccc
720
aagaaggggc ggtgctctgg ccacaaccac gtgcccaatt cgctcagcta cgcccgcgat
780
gagctcaccc agtccttcca ccgactctcg gtctgtgtgt atggcaacaa tctccatggc
840
aacagtgagg tgaaccttca tggttgcagg gacctggggg gagattgggc tcccttctct
900
catgacatcc tgccctatca ggactctgga gatagtggga gcgactacct tttcccagaa
960
gctagtgaag aatcagcagg catcccggga aagtcagaac ttccctacga agagctgtgg
1020
ctggaggaag gcaagcccag ccatacagct ctactcgct ctctgagcga gaagaacaga
1080
tgtgatcagt ttagaggttc tgtccgatcc aaatgtgcga cttctctctc tcccatccct
1140
gggactctgg gagcagcagt gaagtcttca gatactgccc tacctccacc tccagtgcct
1200
cccaaacttg aagccgtcag agaagaatgc cggctcctga acgccccacc tgttccaccc
1260
cgaagcgcaa agcctttgtc caccagtccc tccatccctc ctgcacagct caagccagcg
1320
cggcaacaga ctgcgtctcc cagccccacc ttgtcctact attcttcagg gctacacaac
1380
atcgtcacta aaactgacac aaatccttct gaaagcactc ctgtttctctg ctatccatgt
1440
aaccgagtga aaactgattc tgtggacctg aaatccccgt ttggaagtcc ttctgctgaa
1500
gctgtgtcct ctcggtcttc atggcctaac cattattcag gagcatcaga aagccagacc
1560
aggagtgact tctgtctgga tccaagcagg agttatagtt accctagaca aaagacgcca
1620
ggcacaccaa agagaaaactg cccagcacct tttgattttg atggctgtga gctcctggcc
1680

agccccacta gccagtcac tgcagaattc agtagcagcg tctctggttg tcccaagtca
 1740
 gccagctact ctctggagag cacagatgtg aaatctcttg cagctggtgt gacaaagcag
 1800
 agtacgtcat gccctgcctt accccccagg gctccaaaac tagtggaaga gaaggtcgcc
 1860
 tccgaaacat ctcctttgcc tctgaaaatt gatggtgctg aggaagaccc caagtctggg
 1920
 tcaccagatc t
 1931

<210> 3770

<211> 447

<212> PRT

<213> Homo sapiens

<400> 3770

Arg	Glu	Arg	Ala	Gly	Pro	Lys	Pro	Trp	Ser	His	Pro	Gly	Leu	Gly	Ile
1				5					10					15	
Cys	Gln	Glu	Gln	Phe	Asp	Ile	Asp	Glu	Tyr	Ser	Arg	Ala	Val	Arg	Asp
			20					25					30		
Val	Lys	Thr	Asp	Trp	Asn	Glu	Glu	Cys	Lys	Ser	Pro	Lys	Lys	Gly	Arg
		35				40						45			
Cys	Ser	Gly	His	Asn	His	Val	Pro	Asn	Ser	Leu	Ser	Tyr	Ala	Arg	Asp
	50				55					60					
Glu	Leu	Thr	Gln	Ser	Phe	His	Arg	Leu	Ser	Val	Cys	Val	Tyr	Gly	Asn
65				70					75						80
Asn	Leu	His	Gly	Asn	Ser	Glu	Val	Asn	Leu	His	Gly	Cys	Arg	Asp	Leu
			85					90						95	
Gly	Gly	Asp	Trp	Ala	Pro	Phe	Pro	His	Asp	Ile	Leu	Pro	Tyr	Gln	Asp
		100						105					110		
Ser	Gly	Asp	Ser	Gly	Ser	Asp	Tyr	Leu	Phe	Pro	Glu	Ala	Ser	Glu	Glu
	115						120					125			
Ser	Ala	Gly	Ile	Pro	Gly	Lys	Ser	Glu	Leu	Pro	Tyr	Glu	Glu	Leu	Trp
	130				135						140				
Leu	Glu	Glu	Gly	Lys	Pro	Ser	His	Gln	Pro	Leu	Thr	Arg	Ser	Leu	Ser
145				150						155					160
Glu	Lys	Asn	Arg	Cys	Asp	Gln	Phe	Arg	Gly	Ser	Val	Arg	Ser	Lys	Cys
			165					170						175	
Ala	Thr	Ser	Pro	Leu	Pro	Ile	Pro	Gly	Thr	Leu	Gly	Ala	Ala	Val	Lys
		180						185					190		
Ser	Ser	Asp	Thr	Ala	Leu	Pro	Pro	Pro	Pro	Val	Pro	Pro	Lys	Ser	Glu
		195				200						205			
Ala	Val	Arg	Glu	Glu	Cys	Arg	Leu	Leu	Asn	Ala	Pro	Pro	Val	Pro	Pro
	210				215						220				
Arg	Ser	Ala	Lys	Pro	Leu	Ser	Thr	Ser	Pro	Ser	Ile	Pro	Pro	Arg	Thr
225				230						235					240
Val	Lys	Pro	Ala	Arg	Gln	Gln	Thr	Arg	Ser	Pro	Ser	Pro	Thr	Leu	Ser
			245					250						255	
Tyr	Tyr	Ser	Ser	Gly	Leu	His	Asn	Ile	Val	Thr	Lys	Thr	Asp	Thr	Asn
		260					265						270		
Pro	Ser	Glu	Ser	Thr	Pro	Val	Ser	Cys	Tyr	Pro	Cys	Asn	Arg	Val	Lys
	275						280					285			
Thr	Asp	Ser	Val	Asp	Leu	Lys	Ser	Pro	Phe	Gly	Ser	Pro	Ser	Ala	Glu

```

      290              295              300
Ala Val Ser Ser Arg Leu Ser Trp Pro Asn His Tyr Ser Gly Ala Ser
305              310              315              320
Glu Ser Gln Thr Arg Ser Asp Phe Leu Leu Asp Pro Ser Arg Ser Tyr
      325              330              335
Ser Tyr Pro Arg Gln Lys Thr Pro Gly Thr Pro Lys Arg Asn Cys Pro
      340              345              350
Ala Pro Phe Asp Phe Asp Gly Cys Glu Leu Leu Ala Ser Pro Thr Ser
      355              360              365
Pro Val Thr Ala Glu Phe Ser Ser Ser Val Ser Gly Cys Pro Lys Ser
      370              375              380
Ala Ser Tyr Ser Leu Glu Ser Thr Asp Val Lys Ser Leu Ala Ala Gly
385              390              395              400
Val Thr Lys Gln Ser Thr Ser Cys Pro Ala Leu Pro Pro Arg Ala Pro
      405              410              415
Lys Leu Val Glu Glu Lys Val Ala Ser Glu Thr Ser Pro Leu Pro Leu
      420              425              430
Lys Ile Asp Gly Ala Glu Glu Asp Pro Lys Ser Gly Ser Pro Asp
      435              440              445

```

<210> 3771

<211> 1514

<212> DNA

<213> Homo sapiens

<400> 3771

```

ttcactattc atgatagtga attcaaagaa tatactaccc gtacccaacg tccgccctca
60
gttatattag gagtaaccaa cccttttttt gctaagacac tccagcactg gccacacatt
120
attcgaatag gagaccttaa acctacaagt gaaattccta agcagggttaa agtgaaaaaa
180
ctgaagaatc taaagactct ggattccaaa cctggagttt atacttcata taagccatat
240
ttaaatagag atgaagagat cataaaacaa ttacagaagg gtgtacaaca gaaacgtcct
300
tctgaggctc aaagtgttat tcttcgacgc tatttttttg aactgacaca aagtttcac
360
attccattag aaagatatgt ggcaagcttg atgcctttgc agaaaagtat ttccccatgg
420
aagagtccac ctcaattaag acagtttctt ccagaagaat ttatgaaaac acttgagaaa
480
acaggacctc agctaacctc tagaataaaa ggcgattgga ttggacttta ccggcatttc
540
ctaaagtctc caaatTTTga tggctggttt aagaccgga ggaaggaaat gacccaaaaa
600
ttggaggcac tccatctaga agctctttgt gaagaggact tacttctctg gatccagaaa
660
cacacagaag tagaaacagt agaccttgct ttgaagctga aaaataagct gttgcaggct
720
gatcgagagc acttacctgt gaaacctgac actatggaaa agttacggac acacatagat
780
gccattatct tagcattgcc agaggacttg caaggcatac tgctcaaaac gggcatgaca
840

```

tgatatttgc caagattttc cagccaaaaa ggattatgca tcatgaagca tactgacatt
 900
 tcaaccagac gcacaaagga gatctctcag tggcagcgga gtggaaaatt gccatgaatg
 960
 ctagttagag ggtagaaaga ctgtattgta taaacagacc tttttagtgc attacttttt
 1020
 aaagtggata tctgtggtgg ttccacttta atactgaaac accgaaaggc atttctatat
 1080
 ttttaatcat gttctaaagt gctcttatga gagacttgtg ggccatcagt attagtgatt
 1140
 tcatactgca gtgctggcat tgcagatatt tttttaaatt ggtgctgctt tgcccaatca
 1200
 tgttaaaact cagggggata taaaaataac attcacactg gctatcttct taagaacaga
 1260
 aagactgaac tgtcctatgg ttagaaggaa ttgatgctta tgtagtgcct tctgttgccc
 1320
 tacatgtttc acagttcagc tgctagtctt gaagcttttc cttagcttca ttatgatacg
 1380
 taattttata aggtattctg ttgagtgatc attgtttaaa aaaaaagttt cttgctaccc
 1440
 attgtgttta ttaatagaca tgatggggtt ttttcagttg tcatatagat tttcattatt
 1500
 ttcctttcac gcgt
 1514

<210> 3772

<211> 280

<212> PRT

<213> Homo sapiens

<400> 3772

Phe	Thr	Ile	His	Asp	Ser	Glu	Phe	Lys	Glu	Tyr	Thr	Thr	Arg	Thr	Gln
1			5						10					15	
Arg	Pro	Pro	Ser	Val	Ile	Leu	Gly	Val	Thr	Asn	Pro	Phe	Phe	Ala	Lys
			20					25					30		
Thr	Leu	Gln	His	Trp	Pro	His	Ile	Ile	Arg	Ile	Gly	Asp	Leu	Lys	Pro
		35					40					45			
Thr	Ser	Glu	Ile	Pro	Lys	Gln	Val	Lys	Val	Lys	Lys	Leu	Lys	Asn	Leu
	50					55					60				
Lys	Thr	Leu	Asp	Ser	Lys	Pro	Gly	Val	Tyr	Thr	Ser	Tyr	Lys	Pro	Tyr
65					70					75					80
Leu	Asn	Arg	Asp	Glu	Glu	Ile	Ile	Lys	Gln	Leu	Gln	Lys	Gly	Val	Gln
				85					90					95	
Gln	Lys	Arg	Pro	Ser	Glu	Ala	Gln	Ser	Val	Ile	Leu	Arg	Arg	Tyr	Phe
			100					105					110		
Leu	Glu	Leu	Thr	Gln	Ser	Phe	Ile	Ile	Pro	Leu	Glu	Arg	Tyr	Val	Ala
		115					120					125			
Ser	Leu	Met	Pro	Leu	Gln	Lys	Ser	Ile	Ser	Pro	Trp	Lys	Ser	Pro	Pro
	130					135					140				
Gln	Leu	Arg	Gln	Phe	Leu	Pro	Glu	Glu	Phe	Met	Lys	Thr	Leu	Glu	Lys
145					150					155					160
Thr	Gly	Pro	Gln	Leu	Thr	Ser	Arg	Ile	Lys	Gly	Asp	Trp	Ile	Gly	Leu
				165					170					175	
Tyr	Arg	His	Phe	Leu	Lys	Ser	Pro	Asn	Phe	Asp	Gly	Trp	Phe	Lys	Thr

```

<400> 3773
gcgcccgga ggcgttcagg gaagcgcggc cagcctggg cgggccacca tttccgggg
60
gccgcgcgcg cgcgactcgc gggcagcggc ccctcagtgc gccagccgg gccccgaac
120
gccgggagca tgagcgcggg ctcgagcggc ggggcggcg caacccccgg gggtttgccc
180
gcgccctgcg cctcgaaggt ggagctgcg ctcagctgcc ggcacctgct ggaccgagc
240
cgcctcacca agtccgaccc cagcgtggcg ttgctgcag aggcgcaggg ccagtgggtg
300
caggtgggca gaaccgaggt ggtccggagc agcctgcac ccgtgttctc caaggtcttc
360
acggtggact actacttcga ggaggtgcag aggctgcgt ttgaggtgta cgacacgcat
420
gggccagcg gcttcagctg tcaggaggac gatttcctgg ggggcatgga gtgcaccctg
480
gggcagccag cccaaaagtg gcttctgcaa gtcgtgatga gagtgtctgt tgatgtgctg
540
ggccctgctg gacactgcgc taagcacttc ctgtgctgca cggaatcctc acaccttgcc
600
aggacgggtc cttctttttt attgaggtat gatgacctct gcctccccctg ggcgactgct
660
ggcgccgtga ggtggtggac gtgcaggggt ggccacacgc agggatggca gattgtggcc
720
cagaagaagg tgaccgcgcc gctgctgctc aagtttgga ggaacgctgg caagtccacc
780
atcacggtga tcgccgagga catctcgggg aacaacggct acgtggagct ctccttcggg
840
gccaggaagc tggacgacaa ggacctcttc agcaagtccg accccttcct ggagctctac
900
aggggtcaacg acgaccaggg cttgcagctg gtgtacagga cggaggtggt gaagaacaac
960
ctgaacccca gctgggagcc gttcaaagtc tctctgagtt ccctatgcag ctgtgatgtt
1020

```

caccgacctc taaagttcct ggtctgggat tacgactcca gtgggaagca tgacttcac
1080
ggcgagttca ccagcacttt ccaggagatg caggaagga cggcaaacc tgggcaggag
1140
atgcagtggg actgtatcaa cccaagtat cgggacaaga agaagaatta taagaactca
1200
ggagtggtag tgctggctga cctcaagttc cacaggggtgt actccttcct ggactatata
1260
atgggtggct gccagatcag cttcacctgt gccattgact tcaccgcctc caatggggac
1320
ccgaggagca gccagtcctt gcactacatc agtccccgac agcccaacca ctacctgcag
1380
gccctgcgtg cagtgggagg catctgccag gactatgaca gtgataagag gttcccagct
1440
tttggttttg gggctcgaat ccccccaac ttcgaggtgt cccatgactt tgctatcaat
1500
ttcaaccctg aggacgatga gtgtgaaggc atccagggcg tgggtggaggc ctaccagaac
1560
tgctgcca gggctcagct ctacggcccc accaagctgg cgcccatcat ctccaaggtg
1620
gctgaaccag ccagcgaga gcagagcacc ggccaagcca cgaagtattc agtactgctg
1680
gtgctcactg acggtgtggt gagtgatatg gcagagaccc gaacagccat tgtgagagcc
1740
tcccgcctgc ccatgtcaat catcatcgtg ggtgtgggca acgctgactt ctctgacatg
1800
aggctactgg acggagatga tgggtccctg cgttgccac ggggtgagcc cgcgtccgg
1860
gacatcgtac agttcgtgcc cttccgggag ctcaagaacg catcccctgc ggcgtggcc
1920
aagtgcgtgc tggccgaggt ccgaagcag gtggtggagt actacagcca cagaggcctg
1980
ccccgagaa gcctgggtgt ccctgccgga gaggccagcc caggctgcac accgtgaaga
2040
tgtggagggc gtaggggtggg ggcagtgagg aatgggtccg tacagcctct gtctgcaaca
2100
tgcttggggc cccttaagct ccctccgacc tcccagaagc ctccagtccc caccaggccc
2160
cactcccagt cctcctggga tcctgctggc ttgggcccgg ctctggggcc cccaaggccg
2220
aagggtgaca aaatacaggc ccccatgcct ggccctgcct gagccagggtg ggtggaggga
2280
gggagatcat gagggacttg gagggagctg ggagttcatc cacgggagac cctgccccga
2340
tgagaagggg cagggactgg gggctctgct ttgcgtctaa cctttgtggg ggagggccag
2400
caaggcagtc cccccacgcc cgagaaagcc tgggggaccc agacacctgt cccccagtc
2460
aaagcctggg gaccagaca tcctgtcccc acagtcagcc tcctgtccct gctggtgccc
2520
ccacaccac ctacctgtg ctttttgccg tcgggcctct gcacctgggt ccatggggtc
2580
tgcgggtct gcgggtctg cctggcctgt gggttctgcc ggtggggctt caggagtaat
2640

aaagtgtcac cctatccttg taaa
2664

<210> 3774

<211> 678

<212> PRT

<213> Homo sapiens

<400> 3774

Ala	Pro	Gly	Arg	Arg	Ser	Gly	Lys	Arg	Gly	His	Ala	Trp	Ala	Gly	His
1				5					10					15	
His	Phe	Pro	Gly	Ala	Ala	Ala	Ala	Arg	Leu	Ala	Gly	Ser	Gly	Pro	Ser
			20					25					30		
Val	Arg	Pro	Ala	Gly	Pro	Pro	Asn	Ala	Gly	Ser	Met	Ser	Ala	Gly	Ser
		35					40					45			
Glu	Arg	Gly	Ala	Ala	Ala	Thr	Pro	Gly	Gly	Leu	Pro	Ala	Pro	Cys	Ala
	50					55					60				
Ser	Lys	Val	Glu	Leu	Arg	Leu	Ser	Cys	Arg	His	Leu	Leu	Asp	Arg	Asp
65					70				75					80	
Pro	Leu	Thr	Lys	Ser	Asp	Pro	Ser	Val	Ala	Leu	Leu	Gln	Gln	Ala	Gln
				85					90					95	
Gly	Gln	Trp	Val	Gln	Val	Gly	Arg	Thr	Glu	Val	Val	Arg	Ser	Ser	Leu
			100					105					110		
His	Pro	Val	Phe	Ser	Lys	Val	Phe	Thr	Val	Asp	Tyr	Tyr	Phe	Glu	Glu
		115					120					125			
Val	Gln	Arg	Leu	Arg	Phe	Glu	Val	Tyr	Asp	Thr	His	Gly	Pro	Ser	Gly
	130					135					140				
Phe	Ser	Cys	Gln	Glu	Asp	Asp	Phe	Leu	Gly	Gly	Met	Glu	Cys	Thr	Leu
145					150					155					160
Gly	Gln	Pro	Ala	Gln	Lys	Trp	Leu	Leu	Gln	Val	Val	Met	Arg	Val	Ser
				165					170					175	
Val	Asp	Val	Leu	Gly	Pro	Ala	Gly	His	Cys	Ala	Lys	His	Phe	Leu	Cys
			180					185					190		
Cys	Thr	Glu	Ser	Ser	His	Leu	Ala	Arg	Thr	Gly	Pro	Ser	Phe	Leu	Leu
		195					200					205			
Arg	Tyr	Asp	Asp	Leu	Cys	Leu	Pro	Trp	Ala	Thr	Ala	Gly	Ala	Val	Arg
	210				215						220				
Trp	Trp	Thr	Cys	Arg	Gly	Gly	His	Thr	Gln	Gly	Trp	Gln	Ile	Val	Ala
225					230					235				240	
Gln	Lys	Lys	Val	Thr	Arg	Pro	Leu	Leu	Leu	Lys	Phe	Gly	Arg	Asn	Ala
				245						250				255	
Gly	Lys	Ser	Thr	Ile	Thr	Val	Ile	Ala	Glu	Asp	Ile	Ser	Gly	Asn	Asn
			260					265					270		
Gly	Tyr	Val	Glu	Leu	Ser	Phe	Arg	Ala	Arg	Lys	Leu	Asp	Asp	Lys	Asp
		275					280					285			
Leu	Phe	Ser	Lys	Ser	Asp	Pro	Phe	Leu	Glu	Leu	Tyr	Arg	Val	Asn	Asp
	290					295					300				
Asp	Gln	Gly	Leu	Gln	Leu	Val	Tyr	Arg	Thr	Glu	Val	Val	Lys	Asn	Asn
305					310					315				320	
Leu	Asn	Pro	Ser	Trp	Glu	Pro	Phe	Lys	Val	Ser	Leu	Ser	Ser	Leu	Cys
				325					330					335	
Ser	Cys	Asp	Val	His	Arg	Pro	Leu	Lys	Phe	Leu	Val	Trp	Asp	Tyr	Asp
			340					345					350		
Ser	Ser	Gly	Lys	His	Asp	Phe	Ile	Gly	Glu	Phe	Thr	Ser	Thr	Phe	Gln

```
<210> 3775
<211> 549
<212> DNA
<213> Homo sapiens
```

```
<400> 3775
gaattcgagg tcctgagaga ctgtgagagc cccaactcca ttagtattat gggcctcaat
60
acttccccggg ttgcaattac cctgaagccc caagacccta tggaacagaa cgtagctgag
120
ctgttgcaagt tcctgctggt gaaggatcag agcaagtacc ctatccggga gtctgaaatg
180
```

cgggaaatata ttgttaaaga atatcgcaac cagtttcctg agataactcag gcgagcagca
 240
 gcccacctgg agtgcatttt taggtttgaa ttgagagaac ttgaccctga ggcacacacc
 300
 tacattctgt taaacaaact gggacctgtg ccctttgaag ggtagaaga gagcccaa
 360
 gggccaaaga tgggcctcct gatgatgatt ctaggccaaa tattcctgaa tggcaaccaa
 420
 gccaggagg ctgagatttg ggaaatgctc tggaggatgg ggggtgcagcg ggaaaggagg
 480
 ctttccattt ttgggaaccc aaagagactt ctgtctgtgg agtttgtatg gcagcgttac
 540
 ttagactac
 549

<210> 3776

<211> 183

<212> PRT

<213> Homo sapiens

<400> 3776

Glu	Phe	Glu	Val	Leu	Arg	Asp	Cys	Glu	Ser	Pro	Asn	Ser	Ile	Ser	Ile
1				5				10					15		
Met	Gly	Leu	Asn	Thr	Ser	Arg	Val	Ala	Ile	Thr	Leu	Lys	Pro	Gln	Asp
			20					25					30		
Pro	Met	Glu	Gln	Asn	Val	Ala	Glu	Leu	Leu	Gln	Phe	Leu	Leu	Val	Lys
			35					40					45		
Asp	Gln	Ser	Lys	Tyr	Pro	Ile	Arg	Glu	Ser	Glu	Met	Arg	Glu	Tyr	Ile
	50					55					60				
Val	Lys	Glu	Tyr	Arg	Asn	Gln	Phe	Pro	Glu	Ile	Leu	Arg	Arg	Ala	Ala
65				70						75				80	
Ala	His	Leu	Glu	Cys	Ile	Phe	Arg	Phe	Glu	Leu	Arg	Glu	Leu	Asp	Pro
				85						90				95	
Glu	Ala	His	Thr	Tyr	Ile	Leu	Leu	Asn	Lys	Leu	Gly	Pro	Val	Pro	Phe
			100					105					110		
Glu	Gly	Leu	Glu	Glu	Ser	Pro	Asn	Gly	Pro	Lys	Met	Gly	Leu	Leu	Met
		115					120					125			
Met	Ile	Leu	Gly	Gln	Ile	Phe	Leu	Asn	Gly	Asn	Gln	Ala	Lys	Glu	Ala
	130					135					140				
Glu	Ile	Trp	Glu	Met	Leu	Trp	Arg	Met	Gly	Val	Gln	Arg	Glu	Arg	Arg
145				150						155				160	
Leu	Ser	Ile	Phe	Gly	Asn	Pro	Lys	Arg	Leu	Leu	Ser	Val	Glu	Phe	Val
				165					170					175	
Trp	Gln	Arg	Tyr	Leu	Asp	Tyr									
				180											

<210> 3777

<211> 4915

<212> DNA

<213> Homo sapiens

<400> 3777

ngaggctaca agatcatagt tcatttaaag ccccatccc tgcaagtggg gctttctacc
 60

aatatgaatc ttttcaacct ggaccgtttt cgctttgaga aaaggaataa gattgaggaa
120
gcgcccgaag caaccctca accttcccag cctggccctt cttaccaat ttctcttagt
180
gctgaagagg agaatgctga aggggaagtt agcagggcaa acactcctga ttcagatata
240
actgaaaaaa cagaagattc tagtgttcca gaaactccag ataatgaaag aaaagcaagt
300
atatcatatt tcaaaaatca aagaggaata cagtatatgt atttgtcttc tgatagttaa
360
gatgtcgttt ccccaaattg ctccaatata gttcaagaga aaacattcaa caaagatata
420
gtgattatag tttctgagcc atctgaagat gaagagtccc aaggccttcc taccatggca
480
cgtagaaatg atgatatttc agaactggaa gacctttcgg aattggaaga ccttaaagat
540
gctaaacttc agactttgaa ggaacttttt ccacaaagaa gtgacaatga tttacttaag
600
ttgattgaat caacaagcac tatggatgga gcaattgctg ctgccttgct gatgtttggt
660
gatgcaggtg gtgggcccag gaaaagaaaa ttatcttctt cttcagagcc atatgaggaa
720
gatgaattta atgatgatca atctataaaa aagacaagac tggatcatgg agaggaatca
780
aatgagtctg cagaatctag cagtaattgg gaaaagcagg aaagtattgt actgaaattg
840
caaaaggaat ttcccaattt tgataaacag gaacttagag aagtactcaa ggaacatgaa
900
tggatgtaca cagaagcttt agaatctcta aaagtgtttg cagaagacca agatatgcaa
960
tatgcatcac aaagtgaggt tccaaatgga aaagaagttt cttcaagaag tcaaaattac
1020
cctaaaaatg caactaaaac aaaactaaaa cagaaatttt caatgaaagc acaaaatggc
1080
tttaacaaga aacgtaaaaa aaatgttttt aatccaaaga gagttgttga agactctgaa
1140
tatgattcag gttctgatgt cggtagttca ctagatgagg actatagtag tggatgaagaa
1200
gtgatggagg atggctataa aggtaaaatt cttcacttcc ttcaagatgc ttcaattggt
1260
gaacttactt tgattcctca gtgttctcag aaaaaggctc agaagataac agaactccgg
1320
ccctttaata gttgggaggc tctgttcaca aagatgtcca aaactaatgg cttatcagaa
1380
gatttgatat ggcactgtaa aacactgatc caagaaagag atgtagttat aaggcttatg
1440
aacaatgtg aagacatttc aaataaattg accaaacaag ttaccatgct tactggaaat
1500
ggagggtggat ggaacataga acaaccttcc attctaaacc agagtttgct actcaagccc
1560
tatcagaagg ttggtttgaa ttggctggca ttggtacata aacatggact taatggcatt
1620
ttggcagatg aaatgggcct aggaaaaact attcaagcca ttgcatttct ggcatacctc
1680

tatcaggagg gtaataatgg tcctcatttg atcggttggtc cagcttcaac tatagataac
1740
tggttaaggg aagttaattt atgggtgccct actttgaagg tcctctgtta ctatggttct
1800
caagaagaac gtaaacaat tagatttaac attcatagta gatatgaaga ttacaatgta
1860
attgtgacca catataactg tgcgatcagc agttctgatg atcgtagtct gtttcgacgg
1920
ctgaaactta attacgcaat ttttgatgag ggccatatgc tgaagaatat gggctccatt
1980
cgctaccagc accttatgac aattaatgca aataaccgtt tgctgctcac aggcacacct
2040
gtacagaaca atctgttaga actcatgtcg ctggtgaatt ttggtatgcc acacatgttt
2100
agtagtagca ccagtgaat acgaagaatg ttttcctcta agacaaaatc agcagatgag
2160
caaagcatat atgaaaagga gagaatagca catgcaaac aaattataaa gccatttatt
2220
ctcagaagag taaaagaaga ggttctcaag cagttacccc ccaagaaaga tcgaattgag
2280
ttgtgtgcaa tgtcggagag gcaggagcaa ctctatttgg gtcttttcaa cagattgaaa
2340
aatctatca ataacttggc cacagaaaaa aacacagaaa tgtgcaatgt catgatgcag
2400
ttgaggaaaa tggccaatca tcctttatta catcgccaat attacacagc tgaaaaactc
2460
aaggaaatgt ctcagcttat gctaaaggaa cctacacatt gtgaggctaa cctgacctg
2520
atctttgaag atatggaagt tatgacagac ttcgaactac atgtactttg taaacagtac
2580
cgacacatta ataactttca gttagacatg gacttgattt tagattctgg aaaatttcga
2640
gttttaggat gcatctgtc tgaattgaaa cagaaggggtg atagagttgt gttatttagc
2700
caatttacca tgatgctgga tatcttagag gttctattaa aacatcatca gcataggtac
2760
ctcagattag atggaaagac tcagatttct gaaaggattc atctaattga tgagtttaat
2820
accgatatgg atatctttgt gtttctgcta tcaacaaaag ctggtggatt aggaataaat
2880
ctgacttcag caaatgttgt tataacttcac gatattgact gtaatcctta taatgacaaa
2940
caagcagaag atagatgcca tagagtaggc cagactaaag aagtactagt tataaaacta
3000
ataagccaag ggacgattga agaatccatg ctaaaaatta accaacagaa attgaaacta
3060
gaacaggata tgactacagt agatgaagggt gatgaaggga gtatgccagc agatatagcc
3120
acattactaa aaacatcaat gggcctgtga aataagaact gtgaactctc aattgatgag
3180
gaaatatcaa cttgggtgcac tcaaggacat ttacattatg atgaccatgg ggtttatgaa
3240
catttataac tttttataat ttccatatta catttctcat agtatggaca actttttgcc
3300

actaactgaa ttctccaaat actcacacgt gaaatttcaa aaaagaagcc acaaatatgt
3360
agttctgaag atgttgaata atcatttttac aaagcagttt tctgaatggg gattagttgg
3420
tgattgtttg taacaaatat gctaattgctt tagaaatgtc agtatttttg taattatttc
3480
tacctccaaa tatatatata ttgtctttca ctggataatg tgtgtagatt ttacatgtg
3540
ccttatttga caatgcttat gtcttgtttt tgcttggtctc atttgaagtt cttttttatt
3600
atgttaaaga atgcagctgt atagattata tagctttcat tttattgcta tttgaagcag
3660
atgttcacca atgtcagcaa gaactcaacc tgaatttaaa ggtggcattc catatactaa
3720
catccccag gtctctctca gtacttctgc tgaaacaaat ttatttggct aggcactaag
3780
ttgttttcca gtgaatagta actaaagaag cccctacctt gctccatgga ttaattcctt
3840
ctgttcattt tccaactgca ctaattgtgc atattactct gcctaactct gtgcatgttt
3900
tcattgattt cctctctccg gcttttgctt ctcttgaaac tgttgcccag tcacttctgc
3960
tccaattctc ttctctctta aatagtagtt tattactgcc acatctccat gcatcagcaa
4020
aatgttggtg acatttttct agcctggcag aacagattac ttaaagctat ttcatttcaa
4080
agcagactga atgtgacttc atctaaaggc agcattaggt actgcatgga aataggctcat
4140
taacttgaaa ctcttatcaa aatatatttt accagtttcc agaatttcca gtacaggacc
4200
gcctgaagag agagccattg ttcaattcca attcagtggtg agtgacaaag tgaaatttag
4260
aagtgaagtt gtctatttga tatttaactc tttattaaat ctttctttaa atttctgctt
4320
gtcagtctat attgctgttt ttattatata tcagtttctt tgtataactt gtgagttcca
4380
tgtgttttgt ttttattatg taaatatcat tataaataaa cttatttata aatcaaagat
4440
ttgttaattt ttggaaatca tgcttttcaa agcatcctaa cttgctaaga tgctaggtag
4500
tacgacctc tggatttgga aggcaaataa aactcttaca gtgattattt agatattaaa
4560
gactgagaac tcacggctta accccagttc tgatgggtata ttgaacagac tgaatatatt
4620
ttaccattac agggctaaaa ggagtcttca tgtgttaata ctacctctt gtacatcact
4680
ataccctaat cagttattca aattgttagg aattttacct tttaaaatct cataatggat
4740
atctcatgtt ttctgtatta atgtattttc aatgataggc tgtttctttt tttgttggtta
4800
ttgttggtgt tggtatatcc atacttttat ctctaataa atgtagttgg gttcttctg
4860
taatgcgcta ttatgtcttg ggcttaataa aaatatttgt gatcataaaa aaaaa
4915

<210> 3778
 <211> 1049
 <212> PRT
 <213> Homo sapiens

<400> 3778

Xaa	Gly	Tyr	Lys	Ile	Ile	Val	His	Leu	Lys	Pro	Pro	Ser	Leu	Gln	Val
1				5					10					15	
Val	Leu	Ser	Thr	Asn	Met	Asn	Leu	Phe	Asn	Leu	Asp	Arg	Phe	Arg	Phe
			20					25					30		
Glu	Lys	Arg	Asn	Lys	Ile	Glu	Glu	Ala	Pro	Glu	Ala	Thr	Pro	Gln	Pro
		35					40					45			
Ser	Gln	Pro	Gly	Pro	Ser	Ser	Pro	Ile	Ser	Leu	Ser	Ala	Glu	Glu	Glu
	50					55					60				
Asn	Ala	Glu	Gly	Glu	Val	Ser	Arg	Ala	Asn	Thr	Pro	Asp	Ser	Asp	Ile
65					70					75					80
Thr	Glu	Lys	Thr	Glu	Asp	Ser	Ser	Val	Pro	Glu	Thr	Pro	Asp	Asn	Glu
			85						90					95	
Arg	Lys	Ala	Ser	Ile	Ser	Tyr	Phe	Lys	Asn	Gln	Arg	Gly	Ile	Gln	Tyr
			100					105					110		
Ile	Asp	Leu	Ser	Ser	Asp	Ser	Glu	Asp	Val	Val	Ser	Pro	Asn	Cys	Ser
	115						120					125			
Asn	Thr	Val	Gln	Glu	Lys	Thr	Phe	Asn	Lys	Asp	Thr	Val	Ile	Ile	Val
	130					135						140			
Ser	Glu	Pro	Ser	Glu	Asp	Glu	Glu	Ser	Gln	Gly	Leu	Pro	Thr	Met	Ala
145					150					155					160
Arg	Arg	Asn	Asp	Asp	Ile	Ser	Glu	Leu	Glu	Asp	Leu	Ser	Glu	Leu	Glu
			165						170					175	
Asp	Leu	Lys	Asp	Ala	Lys	Leu	Gln	Thr	Leu	Lys	Glu	Leu	Phe	Pro	Gln
			180					185					190		
Arg	Ser	Asp	Asn	Asp	Leu	Leu	Lys	Leu	Ile	Glu	Ser	Thr	Ser	Thr	Met
	195						200						205		
Asp	Gly	Ala	Ile	Ala	Ala	Ala	Leu	Leu	Met	Phe	Gly	Asp	Ala	Gly	Gly
	210				215							220			
Gly	Pro	Arg	Lys	Arg	Lys	Leu	Ser	Ser	Ser	Ser	Glu	Pro	Tyr	Glu	Glu
225					230						235				240
Asp	Glu	Phe	Asn	Asp	Asp	Gln	Ser	Ile	Lys	Lys	Thr	Arg	Leu	Asp	His
			245						250					255	
Gly	Glu	Glu	Ser	Asn	Glu	Ser	Ala	Glu	Ser	Ser	Ser	Asn	Trp	Glu	Lys
			260					265					270		
Gln	Glu	Ser	Ile	Val	Leu	Lys	Leu	Gln	Lys	Glu	Phe	Pro	Asn	Phe	Asp
	275						280						285		
Lys	Gln	Glu	Leu	Arg	Glu	Val	Leu	Lys	Glu	His	Glu	Trp	Met	Tyr	Thr
	290					295						300			
Glu	Ala	Leu	Glu	Ser	Leu	Lys	Val	Phe	Ala	Glu	Asp	Gln	Asp	Met	Gln
305					310					315					320
Tyr	Ala	Ser	Gln	Ser	Glu	Val	Pro	Asn	Gly	Lys	Glu	Val	Ser	Ser	Arg
			325						330					335	
Ser	Gln	Asn	Tyr	Pro	Lys	Asn	Ala	Thr	Lys	Thr	Lys	Leu	Lys	Gln	Lys
			340					345					350		
Phe	Ser	Met	Lys	Ala	Gln	Asn	Gly	Phe	Asn	Lys	Lys	Arg	Lys	Lys	Asn
	355					360						365			
Val	Phe	Asn	Pro	Lys	Arg	Val	Val	Glu	Asp	Ser	Glu	Tyr	Asp	Ser	Gly

370		375		380
Ser Asp Val Gly Ser Ser Leu Asp Glu Asp Tyr Ser Ser Gly Glu Glu				
385		390		395
Val Met Glu Asp Gly Tyr Lys Gly Lys Ile Leu His Phe Leu Gln Asp				400
	405		410	415
Ala Ser Ile Gly Glu Leu Thr Leu Ile Pro Gln Cys Ser Gln Lys Lys				
	420		425	430
Ala Gln Lys Ile Thr Glu Leu Arg Pro Phe Asn Ser Trp Glu Ala Leu				
	435		440	445
Phe Thr Lys Met Ser Lys Thr Asn Gly Leu Ser Glu Asp Leu Ile Trp				
	450		455	460
His Cys Lys Thr Leu Ile Gln Glu Arg Asp Val Val Ile Arg Leu Met				
465		470		475
Asn Lys Cys Glu Asp Ile Ser Asn Lys Leu Thr Lys Gln Val Thr Met				480
	485		490	495
Leu Thr Gly Asn Gly Gly Gly Trp Asn Ile Glu Gln Pro Ser Ile Leu				
	500		505	510
Asn Gln Ser Leu Ser Leu Lys Pro Tyr Gln Lys Val Gly Leu Asn Trp				
	515		520	525
Leu Ala Leu Val His Lys His Gly Leu Asn Gly Ile Leu Ala Asp Glu				
	530		535	540
Met Gly Leu Gly Lys Thr Ile Gln Ala Ile Ala Phe Leu Ala Tyr Leu				
545		550		555
Tyr Gln Glu Gly Asn Asn Gly Pro His Leu Ile Val Val Pro Ala Ser				
	565		570	575
Thr Ile Asp Asn Trp Leu Arg Glu Val Asn Leu Trp Cys Pro Thr Leu				
	580		585	590
Lys Val Leu Cys Tyr Tyr Gly Ser Gln Glu Glu Arg Lys Gln Ile Arg				
	595		600	605
Phe Asn Ile His Ser Arg Tyr Glu Asp Tyr Asn Val Ile Val Thr Thr				
	610		615	620
Tyr Asn Cys Ala Ile Ser Ser Ser Asp Asp Arg Ser Leu Phe Arg Arg				
625		630		635
Leu Lys Leu Asn Tyr Ala Ile Phe Asp Glu Gly His Met Leu Lys Asn				
	645		650	655
Met Gly Ser Ile Arg Tyr Gln His Leu Met Thr Ile Asn Ala Asn Asn				
	660		665	670
Arg Leu Leu Leu Thr Gly Thr Pro Val Gln Asn Asn Leu Leu Glu Leu				
	675		680	685
Met Ser Leu Leu Asn Phe Val Met Pro His Met Phe Ser Ser Ser Thr				
	690		695	700
Ser Glu Ile Arg Arg Met Phe Ser Ser Lys Thr Lys Ser Ala Asp Glu				
705		710		715
Gln Ser Ile Tyr Glu Lys Glu Arg Ile Ala His Ala Lys Gln Ile Ile				
	725		730	735
Lys Pro Phe Ile Leu Arg Arg Val Lys Glu Glu Val Leu Lys Gln Leu				
	740		745	750
Pro Pro Lys Lys Asp Arg Ile Glu Leu Cys Ala Met Ser Glu Arg Gln				
	755		760	765
Glu Gln Leu Tyr Leu Gly Leu Phe Asn Arg Leu Lys Lys Ser Ile Asn				
	770		775	780
Asn Leu Val Thr Glu Lys Asn Thr Glu Met Cys Asn Val Met Met Gln				
785		790		795
Leu Arg Lys Met Ala Asn His Pro Leu Leu His Arg Gln Tyr Tyr Thr				800


```
<210> 3779
<211> 1853
<212> DNA
<213> Homo sapiens
```

```
<400> 3779
cataggggaaa aggaagacat aaaaatcact aaggaaagaa ctccagaaag tgaagaagaa
60
aatgtagaat gggaaactaa tagagatgat tctgacaatg gagatattaa ttatgattat
120
gttcatgaat tgtcattgga aatgaagcgt cagaagatac agaggggaatt aatgaagctg
180
gaacaagaaa acatggagaa gagagaagaa attatcatta aaaaggaggt ttcaccagaa
240
gtggttagat caaaattgtc cccgtcacct tctctaagaa agtctagcaa atctccgaag
300
cgaaaatcaa gcccgaagtc gtcttcagct agcaagaaag ataggaagac atctgcagta
360
tcttctcccc tgttggaacca gcagagaaat tcaaaaacca accaaagtaa aaagaaagga
420
ccacgtactc ctagtccacc ccctcctata ccagaagata tcgctctggg gaaaaaatac
480
```

aaagaaaaat ataaagtaaa agacaggata gaagaaaaaa caagagatgg aaaggacaga
540
ggacgagatt ttgaacgaca aagagaaaag agagacaagc caaggtctac ttccccagca
600
ggacagcatc attctcctat atcttctaga catcactcat cttcctcaca atcaggatca
660
tctattcaaa gacattctcc ttctcctcgt cgaaaaagaa ctccttcacc atcttatcag
720
cggacactaa ctccaccttt acgacgctct gcctctcctt atccttcaca ttctttgtcg
780
tctccccaga gaaagcagag tcctccaaga catcgctctc caatgcgaga gaaagggaga
840
catgatcatg aacgaacttc acagtctcat gatcgacgcc acgaagggag ggaagatact
900
agggggcaaac gagacagaga aaaggactca agagaagaac gagaatatga acaggatcag
960
agctcttcta gagaccacag agatgacaga gaacctcgag atggtcggga tcggagagat
1020
gccagagata ctagggaccg aagggaacta agagactcca gagacatgcg ggactcaagg
1080
gagatgagag attatagcag agataccaaa gagagccgtg atcccagaga ttctcggctc
1140
actcgtgatg cccatgacta cagggaccgt gaaggtcgag atactcatcg aaaggaggat
1200
acatatccag aagaatcccg gagttatggc cgaaaccatt tgagagaaga aagttctcgt
1260
acggaaataa ggaatgagtc cagaaatgag tctcgaagtg aaattagaaa tgaccgaatg
1320
ggccgaagta gggggagggg tcctgagtta cctgaaaagg gaagtcgagg ctcaagaggt
1380
tctcaaattg atagtcacag tagtaatagc aactatcatg acagctggga aactcgaagt
1440
agctatcctg aaagagatag atatcctgaa agagacaaca gagatcaagc aagggattct
1500
tccttttgaga gaagacatgg agagcgagac cgtcgtgacc agagagagag atcaaagacc
1560
aagctcacca attcgacatc agggaaggaa tgacgagctt gagcgtgatg aaagaagaga
1620
ggaacgaaga gtagacaggt ccattcaaga tctgggtcat ttgatagcag agacaggctt
1680
caagaacgag atcgatatga acacgacaga gagcgcgagn nagagaggag agatacgagg
1740
cagagagaat gggaccgaga tgctgataaa gattggccac gcaacaggga tcgagataga
1800
ttgcgagaac gagaacgaga gagagaacga gacaaaagga gagacttggc tcg
1853

<210> 3780

<211> 530

<212> PRT

<213> Homo sapiens

<400> 3780

His Arg Glu Lys Glu Asp Ile Lys Ile Thr Lys Glu Arg Thr Pro Glu

1				5					10					15			
Ser	Glu	Glu	Glu	Asn	Val	Glu	Trp	Glu	Thr	Asn	Arg	Asp	Asp	Ser	Asp		
			20					25					30				
Asn	Gly	Asp	Ile	Asn	Tyr	Asp	Tyr	Val	His	Glu	Leu	Ser	Leu	Glu	Met		
		35					40					45					
Lys	Arg	Gln	Lys	Ile	Gln	Arg	Glu	Leu	Met	Lys	Leu	Glu	Gln	Glu	Asn		
		50				55					60						
Met	Glu	Lys	Arg	Glu	Glu	Ile	Ile	Ile	Lys	Lys	Glu	Val	Ser	Pro	Glu		
65					70					75					80		
Val	Val	Arg	Ser	Lys	Leu	Ser	Pro	Ser	Pro	Ser	Leu	Arg	Lys	Ser	Ser		
				85					90				95				
Lys	Ser	Pro	Lys	Arg	Lys	Ser	Ser	Pro	Lys	Ser	Ser	Ser	Ala	Ser	Lys		
			100					105					110				
Lys	Asp	Arg	Lys	Thr	Ser	Ala	Val	Ser	Ser	Pro	Leu	Leu	Asp	Gln	Gln		
		115					120					125					
Arg	Asn	Ser	Lys	Thr	Asn	Gln	Ser	Lys	Lys	Lys	Gly	Pro	Arg	Thr	Pro		
	130					135					140						
Ser	Pro	Pro	Pro	Pro	Ile	Pro	Glu	Asp	Ile	Ala	Leu	Gly	Lys	Lys	Tyr		
145					150					155					160		
Lys	Glu	Lys	Tyr	Lys	Val	Lys	Asp	Arg	Ile	Glu	Glu	Lys	Thr	Arg	Asp		
			165					170					175				
Gly	Lys	Asp	Arg	Gly	Arg	Asp	Phe	Glu	Arg	Gln	Arg	Glu	Lys	Arg	Asp		
		180						185				190					
Lys	Pro	Arg	Ser	Thr	Ser	Pro	Ala	Gly	Gln	His	His	Ser	Pro	Ile	Ser		
	195					200						205					
Ser	Arg	His	His	Ser	Ser	Ser	Ser	Gln	Ser	Gly	Ser	Ser	Ile	Gln	Arg		
	210					215						220					
His	Ser	Pro	Ser	Pro	Arg	Arg	Lys	Arg	Thr	Pro	Ser	Pro	Ser	Tyr	Gln		
225					230					235					240		
Arg	Thr	Leu	Thr	Pro	Pro	Leu	Arg	Arg	Ser	Ala	Ser	Pro	Tyr	Pro	Ser		
			245						250					255			
His	Ser	Leu	Ser	Ser	Pro	Gln	Arg	Lys	Gln	Ser	Pro	Pro	Arg	His	Arg		
		260						265				270					
Ser	Pro	Met	Arg	Glu	Lys	Gly	Arg	His	Asp	His	Glu	Arg	Thr	Ser	Gln		
	275						280				285						
Ser	His	Asp	Arg	Arg	His	Glu	Gly	Arg	Glu	Asp	Thr	Arg	Gly	Lys	Arg		
	290					295					300						
Asp	Arg	Glu	Lys	Asp	Ser	Arg	Glu	Glu	Arg	Glu	Tyr	Glu	Gln	Asp	Gln		
305					310					315					320		
Ser	Ser	Ser	Arg	Asp	His	Arg	Asp	Asp	Arg	Glu	Pro	Arg	Asp	Gly	Arg		
			325						330				335				
Asp	Arg	Arg	Asp	Ala	Arg	Asp	Thr	Arg	Asp	Arg	Arg	Glu	Leu	Arg	Asp		
		340						345					350				
Ser	Arg	Asp	Met	Arg	Asp	Ser	Arg	Glu	Met	Arg	Asp	Tyr	Ser	Arg	Asp		
	355						360					365					
Thr	Lys	Glu	Ser	Arg	Asp	Pro	Arg	Asp	Ser	Arg	Ser	Thr	Arg	Asp	Ala		
	370					375						380					
His	Asp	Tyr	Arg	Asp	Arg	Glu	Gly	Arg	Asp	Thr	His	Arg	Lys	Glu	Asp		
385					390					395					400		
Thr	Tyr	Pro	Glu	Glu	Ser	Arg	Ser	Tyr	Gly	Arg	Asn	His	Leu	Arg	Glu		
			405						410					415			
Glu	Ser	Ser	Arg	Thr	Glu	Ile	Arg	Asn	Glu	Ser	Arg	Asn	Glu	Ser	Arg		
		420						425				430					
Ser	Glu	Ile	Arg	Asn	Asp	Arg	Met	Gly	Arg	Ser	Arg	Gly	Arg	Val	Pro		

```
<210> 3781
<211> 1364
<212> DNA
<213> Homo sapiens
```

2926

ggacaaactc gtgtggttta aagtcactgt gagagctgga gttgagtctg cctacggggg
 1080
 aggactgcgg cacctacctc gcagggctgt tgtgaggagc aatgtaaccg tgattttgaa
 1140
 ctgtgattct ggaagggcgg tgtgcgtgtc cccgggggtg tgccagggga gtgaggagaa
 1200
 aaggccaggg agacagcctc actcaggcag ctgagtggga gagcatttat ctctaaacct
 1260
 ggaggggtat atggtgggac aggaggaatt tgggcaggaa ctttcatgct aggggtttgg
 1320
 gggactcgct ggacaatgcc cctggacccc ccgggggtac gcgt
 1364

<210> 3782

<211> 112

<212> PRT

<213> Homo sapiens

<400> 3782

Met	Asn	Asp	Ile	Gln	Asn	Ser	Arg	Leu	Asn	Pro	Gln	Asp	Leu	Cys	Leu
1				5					10					15	
Thr	Pro	Asp	Pro	Gly	Ser	Arg	Asn	Ser	Gly	Ser	Ser	His	Leu	Val	Trp
			20					25					30		
Asp	Leu	Gln	Asp	Ser	Ser	Glu	Leu	His	Pro	Glu	Phe	Ala	Lys	Cys	His
		35					40					45			
Val	Pro	Trp	Thr	Pro	Arg	Phe	Ala	Tyr	Gly	Val	Phe	Tyr	Ala	Asp	Pro
	50					55				60					
Cys	Thr	Gly	Gly	Asp	Ser	Tyr	His	Pro	His	Glu	Gln	Ser	Ser	Pro	Pro
65					70					75				80	
Ile	Phe	Ser	Lys	Gln	Ser	Trp	Ala	Leu	Thr	Pro	Leu	Glu	Arg	Gly	Arg
			85						90					95	
Asn	Gly	Ser	Lys	Ile	Thr	Ser	Arg	Lys	Gly	Gln	Ser	Val	Leu	Met	Thr
			100					105					110		

<210> 3783

<211> 4137

<212> DNA

<213> Homo sapiens

<400> 3783

nncaaggcgc ctgcgactcg gtcccaggtc ggcgggcggc gcgcggcggg ctcgcgcggg
 60
 ggccccggcg cgccggggcg cgcagtacgc agcgcgcgga cccacgccac ggccaggagc
 120
 ccagagcagc gcggccacac tgcccagggg tcggccctcg gccccggcgc tcggagcgcg
 180
 gcggctgcct gggctttaat ggctgctccg cggagcagcg cctagggctg gaaggcggct
 240
 gcggctcagg aagtcacccg agcaagcctc cttcggggcc ggccgcaccc gccgcggcgc
 300
 gctccatggg ggcgcgctcc ccccgggcgg cccgctgacc cgggacgccg gggcccgcgc
 360
 gctcgccggc cgcgcgctcc ggccatgaac tgagcccgcg ggccagcccc gcgcctgctc
 420

cgcccgcgcc tttcttctcg cgctcctcc gcccgcgcc ggcgggcccg gctccccggg
480
ggctgcgggc ccccgggctc ggcgggccgc gggccccggg gcgcggggcg gcggcggcgg
540
ggggcgcgcg gctccggggc cggcgcctgc accatgaact accagcagca gctggccaac
600
tcggctgcca tccgggcccga gatccagcgc ttcgagtcgg tccaccccaa catctactcc
660
atctacgagc tgctggagcg cgtggaggag ccggtgctgc agaaccagat ccgggagcac
720
gtcatcgcca tcgaagatgc cttcgtgaac agccaggaat ggacgctgag tcgatctgtc
780
ccggagctca aagtgggaat tgtgggtaac ttggccagcg gcaagtctgc cctggtgcac
840
cggtaacctga cgggcacata tgtccaggag gagtctccgg aaggtggcag gttcaagaaa
900
gagattgtcg ttgatggaca gagctatctg ctgctgatca gagatgaagg gggccccccg
960
gaggcgagct ttgcatgtg ggtggacgct gttatatattg tcttcagctt ggaggatgaa
1020
ataagtttcc agaccgttta ccactactac agtcgaatgg ccaactatcg gaacacgagc
1080
gagattcctc tggttctggt gggaacccag gatgccataa gttctgctaa cccgagggtc
1140
atcgatgacg ccagggcgag gaagctctcc aacgacctga aacggtgcac gtactacgag
1200
acgtgtgcta catacgggct gaatgtggag agggctcttc aggacgttgc ccagaagatt
1260
gttgccacaa ggaagaagca gcagctgtcc ataggaccct gcaagtcgct acctaattct
1320
cccagccatt cctcgtctg ttcgcgcgag gtgtctgccg tgcacatcag ccagacaagt
1380
aatggagggtg ggagtttaag cgactattcc tctccggtc catcgactcc cagcaccagc
1440
cagaaggaac ttcggatcga tgttctctcc actgccaaac cgcccacgcc cgttcgcaag
1500
cagtctaagc gccggtccaa cctgttcacc tctcgaaaag ggagcgaccc agacaaagag
1560
aagaaaggcc tggagagtcg tgcggacagc attgggagcg gccgagccat cccaattaaa
1620
cagggcatgc tgttgaagcg aagtggcaaa tcgttgaata aagagtggaa aaagaaatat
1680
gtcacctgtg gtgacaatgg cgtgctgacc tatcatccca gtttacatga ttacatgcag
1740
aatgttcatg gtaaggagat tgaccttctg agaaccactg tgaaagtccc agggaagagg
1800
ccaccccgag ccacgtcagc ctgcgcaccc atctccagcc ctaaaaccaa tggcctatcc
1860
aaggacatga gcagtttaca catctcacc aattcagaca cagggtggg tgactccgta
1920
tgctccagcc ccagtatctc cagcaccacc agccccaagc tcgacccgcc cccctcccc
1980
cacgccaaca gaaagaagca ccgaaggaag aaaagcacta gcaacttcaa agccgacggc
2040

ctgtccggca ctgctgaaga acaagaagaa aatttttgagt ttatcattgt gtccctcact
2100
ggccaaacat ggcactttga agccacgacg tatgaggagc gggacgcctg ggtccaagcc
2160
atcgagagcc agatcctggc cagcctgcag tcgtgcgaga gcagcaagaa caagtcccgg
2220
ctgacgagcc agagcgaggc catggccctg cagtcgatcc ggaacatgcg cggaactcc
2280
cactgtgtgg actgcgagac ccagaatccc aactgggcca gtttgaactt gggagccctc
2340
atgtgcatcg aatgctcagg gatccaccgg aatcttggca cccacctttc ccgagtccga
2400
tctctggacc tggatgactg gccaatcgag ctcatcaagg tgatgtcatc catcggaac
2460
gagctagcca acagcgtctg ggaagagagc agccaggggc ggacgaaacc atcggtagac
2520
tccacaaggg aagagaagga acggtggatc cgtgccaaagt acgagcagaa gctcttctg
2580
gccccgtgc cctgcacgga gctgtccctg ggccagcacc tgctgcgggc caccgccgac
2640
gaggacctgc ggacggccat cctgctgctg gcacacggct cccgggacga ggtgaacgag
2700
acctgcgggg agggagacgg ccgcacggcg ctgcatctgg cctgccgcaa ggggaatgtg
2760
gtcctggcgc agctcctgat ctggtacgga gtggacgtca cggcccagaga tgcccacggg
2820
aacacagctc tggcctacgc ccggcaggcc tccagccagg agtgcacga cgtgctgctg
2880
cagtaaggct gccccgacga gcgcttcgtg ctcatggcca cccctaacct gtccaggaga
2940
aacaataacc ggaacaacag cagtgggagg gtgcccacca tcatctgagg aacagccgtg
3000
ccgcctgct cgccgcacct gggacgcggc agcctcgccg cattctcgct cagaagtcgc
3060
agcacgtgag tcccgtcgca tcccctccct ctctctggtg gccacctccc tcccgccac
3120
ccactctcac cccaaacaaa atcacaaaac ctggacatcc ctcaaggggc gaagaggcgg
3180
ccgggagact gcagaagtgg ctccctttca taaactcccc taaaccacac acaggagaga
3240
gcgacgggccc tcggcccttt gatgatagca catggcgcag gacccttgct ctggtggcac
3300
aagggatggg gacgcgaggg ggaggggagg cgaggaacaa ggagaagggg caactttcct
3360
taactggcag ttgagcacat agtacatttc ccctctacca aacggaacac ttggattcca
3420
tctcttctct gaggagctcg acggcataaa tcagaagcaa gcacagagtt tgtcaggttt
3480
gaagccccta tgatggtgtg tgtcaaatca gttgtagcta atctgtccag ggagaatact
3540
ggcttcatta cacttgta ca gccagattct tcccgatta ctgctgttta atagaacgtg
3600
attagtcac gcgagaaga aagcatatta gccgaggagg tagtcacgcg gcacgcgccg
3660

gtgattgcc a cgatgtgatt gcaataactct tagaagcacc atattatccc agacatgttc
 3720
 tttcaagccc ttggagccct ctctaaatct actgtcatca tttagtatct gtttaatttt
 3780
 tcagtccaaa gagaggaaat cagtcgctga gtattatcttg actccggtct ccttggtgca
 3840
 aaaacaaaaat gggaaaaata aataagaata actcagaaac tcaaaaggaa accacaaatt
 3900
 cagctaataa tagcatttcg agtatatttc gtaaactaag gaaatacaca aaaggctgtt
 3960
 ttttccgact gtaagagata tttgatgtcc ttttgccgag gtggatgtgt tagtctcagg
 4020
 ccttcctgga ccacgttgcc caagtcacac aggcttctgt gttatgtatt tagataagat
 4080
 gtgtgaaaat atatttgaat aaaagaagtt cataaaaaaa aaaaaaaaaa aaaaaaa
 4137

<210> 3784

<211> 804

<212> PRT

<213> Homo sapiens

<400> 3784

Met	Asn	Tyr	Gln	Gln	Gln	Leu	Ala	Asn	Ser	Ala	Ala	Ile	Arg	Ala	Glu	1	5	10	15
Ile	Gln	Arg	Phe	Glu	Ser	Val	His	Pro	Asn	Ile	Tyr	Ser	Ile	Tyr	Glu	20	25	30	
Leu	Leu	Glu	Arg	Val	Glu	Glu	Pro	Val	Leu	Gln	Asn	Gln	Ile	Arg	Glu	35	40	45	
His	Val	Ile	Ala	Ile	Glu	Asp	Ala	Phe	Val	Asn	Ser	Gln	Glu	Trp	Thr	50	55	60	
Leu	Ser	Arg	Ser	Val	Pro	Glu	Leu	Lys	Val	Gly	Ile	Val	Gly	Asn	Leu	65	70	75	80
Ala	Ser	Gly	Lys	Ser	Ala	Leu	Val	His	Arg	Tyr	Leu	Thr	Gly	Thr	Tyr	85	90	95	
Val	Gln	Glu	Glu	Ser	Pro	Glu	Gly	Gly	Arg	Phe	Lys	Lys	Glu	Ile	Val	100	105	110	
Val	Asp	Gly	Gln	Ser	Tyr	Leu	Leu	Leu	Ile	Arg	Asp	Glu	Gly	Gly	Pro	115	120	125	
Pro	Glu	Ala	Gln	Phe	Ala	Met	Trp	Val	Asp	Ala	Val	Ile	Phe	Val	Phe	130	135	140	
Ser	Leu	Glu	Asp	Glu	Ile	Ser	Phe	Gln	Thr	Val	Tyr	His	Tyr	Tyr	Ser	145	150	155	160
Arg	Met	Ala	Asn	Tyr	Arg	Asn	Thr	Ser	Glu	Ile	Pro	Leu	Val	Leu	Val	165	170	175	
Gly	Thr	Gln	Asp	Ala	Ile	Ser	Ser	Ala	Asn	Pro	Arg	Val	Ile	Asp	Asp	180	185	190	
Ala	Arg	Ala	Arg	Lys	Leu	Ser	Asn	Asp	Leu	Lys	Arg	Cys	Thr	Tyr	Tyr	195	200	205	
Glu	Thr	Cys	Ala	Thr	Tyr	Gly	Leu	Asn	Val	Glu	Arg	Val	Phe	Gln	Asp	210	215	220	
Val	Ala	Gln	Lys	Ile	Val	Ala	Thr	Arg	Lys	Lys	Gln	Gln	Leu	Ser	Ile	225	230	235	240
Gly	Pro	Cys	Lys	Ser	Leu	Pro	Asn	Ser	Pro	Ser	His	Ser	Ser	Val	Cys				

2931

675						680					685				
Asp	Glu	Asp	Leu	Arg	Thr	Ala	Ile	Leu	Leu	Leu	Ala	His	Gly	Ser	Arg
690						695					700				
Asp	Glu	Val	Asn	Glu	Thr	Cys	Gly	Glu	Gly	Asp	Gly	Arg	Thr	Ala	Leu
705						710					715				
His	Leu	Ala	Cys	Arg	Lys	Gly	Asn	Val	Val	Leu	Ala	Gln	Leu	Leu	Ile
720						725					730				
725						730					735				
Trp	Tyr	Gly	Val	Asp	Val	Thr	Ala	Arg	Asp	Ala	His	Gly	Asn	Thr	Ala
740						745					750				
Leu	Ala	Tyr	Ala	Arg	Gln	Ala	Ser	Ser	Gln	Glu	Cys	Ile	Asp	Val	Leu
755						760					765				
Leu	Gln	Tyr	Gly	Cys	Pro	Asp	Glu	Arg	Phe	Val	Leu	Met	Ala	Thr	Pro
770						775					780				
Asn	Leu	Ser	Arg	Arg	Asn	Asn	Asn	Arg	Asn	Asn	Ser	Ser	Gly	Arg	Val
785						790					795				
790						795					800				
Pro	Thr	Ile	Ile												

```
<210> 3785
<211> 1901
<212> DNA
<213> Homo sapiens
```

<400>	3785				
tttttttttt	tttttttttt	tttttttttt	tttttttttt	ttctgggtcaa	actccctttt
60					
tattaagggt	tatcaagctg	tacacgggtcc	ctaccctgct	ccgctccgag	ttcggggcagc
120					
gcaattcacc	actctcccaa	agccggacca	cagctgggtg	aggggtggga	cagagagtag
180					
gagcagtccc	agcatgcagt	gcagcagccc	aaagcctcgg	gcgaggcatc	gcccttcate
240					
ccccttcagg	gcacagcgag	atgcggggcca	gagctctttt	gctgggacgt	acacagccaa
300					
ggtcaccctc	cagcccggtc	tgtcccatgt	gcagggtgatg	gggggtacga	taagcagcaa
360					
tgagggccca	ggaagacctc	agtctcctgg	gggcccatcc	taaaagatgg	caagggcagc
420					
aaagtatttc	catcctgctc	ctacaattta	gaaaccttct	tttttagtgt	caaaatatag
480					
cgttgagggg	agctgggacgc	taggggtcttc	accctaacgc	aaagcaaaag	ccgaacggaa
540					
cggggagcaag	cgaacagaaac	aggagcaagc	agcacacaca	ggccagtgat	gtgcaagaag
600					
cggagagagg	tgagccggct	gcagcactgg	gcgagaactg	cgggtgaggt	aagggccaca
660					
gcctgacctg	ctcatctatt	gaggggggcta	gggaagggtt	caggggttga	gggtccaggc
720					
ccaacctccc	cactccacag	ttggcacagg	ttctccctgc	ttggcagctt	ctatcgtggg
780					
cagccctctg	gggacttgca	ggggtaggtg	taaaggtggc	agtactgggg	ctgggctggg
840					
gaccagtttc	tagcaccaca	ctctgagcca	agggggtcct	ggggatgagg	ctagagtccc
900					

gtgtgccctc gggttcctagg ccccaaattc ctctcctggg gctgtggcaa gccagtggt
 960
 ggcacctccc ttggccaggc acagacacac aaacaccaca cacgtggggc cagggaacac
 1020
 tcagaggagc cgtcccatgg caggcagacg ggatggcagg gcagcgggtg cctccatcct
 1080
 gggccacagg aaccctgctc agccttgtct ataccttggtg cacctgaggg ggtagctcat
 1140
 cctccgagcc ctcttcgggc acgggctcag ggtgccttga tgccgactgc ccatcttctg
 1200
 cccacctccc aagaggcagc cgagagaaat gagagggaac cctgggcact gtgccaggat
 1260
 ctgtgatgcc accgtagcgc ctctggaagc ccccatgcag ggcgggtggtc tcaggagctc
 1320
 caggccgggg tgctgcacag ggatagctag cagagcgagg gatagactgg ggggcccggg
 1380
 cgccctctcc ccttcatca ggggcgcttt ctccactctc atcactctcc cggcgggtgcc
 1440
 atacatgccg ctcaggttca gcctgggcct gctgcttggtg gagctggtgc atatagaggg
 1500
 catgcaggct catctctgtg gatgcatatt ctgacagcac caggctctgc agctgtcctt
 1560
 cccacacgct gctcccggag ctggctgtcc tggcatccac cccagagcct gtcatggtgc
 1620
 tgtgagcccg gcctgtgggc gcctgcccgg gttgcagcgg ggagaaggag cgcagggcag
 1680
 aggcgacttc agccctgtgc ctggagccct gcaggctctc gggcagtga gggccccggc
 1740
 aggatgagcc agctaccaca tttgcgataa ggctcagggg ctcagactca gattgtaagg
 1800
 actggataga cgtaaagagg gcattttcag ggagcagacc cccttgggcg aggctagcag
 1860
 ctgctccatc ccgctgaacc tgctccttga ggaagcctag g
 1901

<210> 3786

<211> 168

<212> PRT

<213> Homo sapiens

<400> 3786

Met	Thr	Gly	Ser	Gly	Val	Asp	Ala	Arg	Thr	Ala	Ser	Ser	Gly	Ser	Ser
1				5					10					15	
Val	Trp	Glu	Gly	Gln	Leu	Gln	Ser	Leu	Val	Leu	Ser	Glu	Tyr	Ala	Ser
			20					25					30		
Thr	Glu	Met	Ser	Leu	His	Ala	Leu	Tyr	Met	His	Gln	Leu	His	Lys	Gln
		35					40				45				
Gln	Ala	Gln	Ala	Glu	Pro	Glu	Arg	His	Val	Trp	His	Arg	Arg	Glu	Ser
	50					55			60						
Asp	Glu	Ser	Gly	Glu	Ser	Ala	Pro	Asp	Glu	Gly	Gly	Glu	Gly	Ala	Arg
65				70				75						80	
Ala	Pro	Gln	Ser	Ile	Pro	Arg	Ser	Ala	Ser	Tyr	Pro	Cys	Ala	Ala	Pro
			85					90					95		
Arg	Pro	Gly	Ala	Pro	Glu	Thr	Thr	Ala	Leu	His	Gly	Gly	Phe	Gln	Arg

			100					105				110					
Arg	Tyr	Gly	Gly	Ile	Thr	Asp	Pro	Gly	Thr	Val	Pro	Arg	Val	Pro	Ser		
		115					120					125					
His	Phe	Ser	Arg	Leu	Pro	Leu	Gly	Gly	Trp	Ala	Glu	Asp	Gly	Gln	Ser		
	130					135					140						
Ala	Ser	Arg	His	Pro	Glu	Pro	Val	Pro	Glu	Glu	Gly	Ser	Glu	Asp	Glu		
145					150				155						160		
Leu	Pro	Pro	Gln	Val	His	Lys	Val										
				165													

<210> 3787

<211> 717

<212> DNA

<213> Homo sapiens

<400> 3787

gcgtttgtcc agtattattc aaatgaccgg acataatgaa ggatggcgac aggacgaagg
 60
 cttctgcoct aagattttctc tcatctcggt tttaccatct tgtcttcgtg gccctcactt
 120
 gtggttggtg ctgctgtggt gttatggaca ctgctagtgt taatacagca caataagaaa
 180
 gtgtgaaagg ggccgggaaa ggtggcgagg gcggggcggc acgtgggttc ccctcacagc
 240
 actgtgcacg gtgcctgctt gggttcctcc atgtggacca gcaccgctga gcggccactc
 300
 tgcgccaggc actgttcatg ggtgatcacg gcagccccct tattacagac aagcaaactg
 360
 gggcttagcc agctcaggag gctcgcaggt aggtggggga gcctggagct gaaccagggc
 420
 gtctgaccca ggtgctcccc cttagccacc tgcttccatg agcacttggc accccagggc
 480
 cccgggggtg ctgcacgtga gccgtggcgt agcttaatcg acgcgcacaa ggattccgtg
 540
 tattcagtgt ttattgaggc tgtgttttga agcatgccat tgatagggtg aacataacat
 600
 ttttcttaga ataaaagcac attccataca ctctactgtg gcagaataag gaggttcaca
 660
 gataattgag agaagctacc gaaacgtgct gttttctgaa ggtctccctt caccgct
 717

<210> 3788

<211> 113

<212> PRT

<213> Homo sapiens

<400> 3788

Met	Leu	Gln	Asn	Thr	Ala	Ser	Ile	Asn	Thr	Glu	Tyr	Thr	Glu	Ser	Leu		
1				5				10					15				
Cys	Ala	Ser	Ile	Lys	Leu	Arg	His	Gly	Ser	Arg	Ala	Ala	Pro	Pro	Gly		
		20					25					30					
Pro	Trp	Gly	Ala	Lys	Cys	Ser	Trp	Arg	Gln	Val	Ala	Lys	Gly	Glu	His		
	35				40				45								
Leu	Gly	Gln	Thr	Pro	Gly	Phe	Ser	Ser	Arg	Leu	Pro	His	Leu	Pro	Ala		

50		55		60
Ser Leu Leu Ser Trp Leu Ser Pro Ser Leu Leu Val Cys Asn Lys Gly				
65		70		75
Ala Ala Val Ile Thr His Glu Gln Cys Leu Ala Gln Ser Gly Arg Ser				
	85		90	95
Ala Val Leu Val His Met Glu Glu Pro Lys Gln Ala Pro Cys Thr Val				
	100		105	110
Leu				

<210> 3789

<211> 4341

<212> DNA

<213> Homo sapiens

<400> 3789

```

ngaattcatt ttcaaaggag gcgaactacc tgtgccctaa ccttggaagc tggagaaaag
60
ttactgctca caactgacct gaaaactaaa gagtctgtgg gtaggagaat cagtcaactt
120
caggacagct ggaaagacat ggagccccag ctggcagaga tgattaagca gttccagagc
180
actgtagaga cctgggacca gtgtgaaaag aaaatcaagg agttgaaaag caggctgcaa
240
gttttaaagg cacaaagtga agatcctctt ccagagcttc acgaggacct ccataacgaa
300
aaagagctga ttaaggaact agaacagtct ttggctagct ggactcagaa cttgaaagaa
360
cttcaaacta tgaaggcgga cttaaccggg cacgttctcg tggaagatgt gatggttttg
420
aaggagcaaa tagagcattt gcacagacaa tgggaggacc tctgcttaag ggtggccata
480
cgtaaacagg agattgaaga cagactcaat acatgggttg tattcaatga aaaaaataaa
540
gagttgtgtg cctggctggt gcagatggaa aacaaagttc tacagacagt ggacattagt
600
attgaagaaa tgattgaaaa gttacagaag gactgcatgg aagaaataaa cttgttttagt
660
gaaaacaagt tacagttaaa gcagatgggt gaccagttga tcaaggccag caacaaatca
720
agagcagctg agatcgatga caagctcaac aaaattaacg atcgttggca acatcttttt
780
gatgtcatcg gatcaagggt gaagaagctg aaggagacct ttgcttttat tcagcagttg
840
gacaaaaaca tgagcaacct tcgcacctgg ttggctcgaa ttgagtctga gctttccaag
900
cctgttggtt atgatgtctg cgatgatcaa gagatccaga agaggctcgc tgagcagcag
960
gatctacagc gagatattga acaacacagc gcaggggttg agtccgtggt taacatctgt
1020
gacgtcctac tgcacgactc cgatgcctgt gcaaatgaga ccgagtgtga ctcgatccag
1080
cagaccacca ggagcctgga cagacgctgg aggaacattt gtgccatgtc catggagcgg
1140

```

cgcatgaaaa tcgaggagac gtggcgccctg tggcagaagt ttttagacga ctattctcgc
1200
tttgaggact ggctcaagtc agctgagagg acggcagcct gcccaaattc ctcagaggtg
1260
ttgtacacga gtgccaaaga ggaactgaag aggtttgagg cctttcagcg gcagattcat
1320
gagcggctca ctcagctgga gctcatcaac aagcagtacc ggcggctggc ccgggagaac
1380
cgcacagaca cggccagcag gctgaagcag atgggtccacg agggcaacca gcgctgggac
1440
aaccttcaga ggcggttcac agccgtcctg cggagactca ggcatttcac caaccagagg
1500
gaagaatttg agggcaccag ggagagcatt ctggtgtggc tcacagagat ggacctgcag
1560
ctgaccaacg tggagcactt ctcagagagt gacgccgatg acaagatgcg ccaactgaat
1620
ggcttccaac aggaaattac attaaatacc aacaagattg atcagctcat tgtgtttggg
1680
gagcagctga ttcagaagag cgagcccctg gatgctgtgc tgattgagga tgagctggag
1740
gaactccacc gctactgcca ggaggtgttt ggaagggtct cccggttcca ccggcggctc
1800
acctcctgca ctccgggctt ggaagatgaa aaggaggcct ctgagaatga aacagacatg
1860
gaagacccca gagaaatcca gactgattct tggcgtaaac ggggagagag cgaggaaccg
1920
tcattctctc agtccctgtg tcatctagt gcccagggc acgagcggtc tggctgcgag
1980
accctgtca gcgtggactc catccccctg gagtgggacc acacaggcga cgtggggggc
2040
tctctctctc acgaagagga cgaggagggc ccatactaca gcgcactgtc aggtaaatcc
2100
atttcggatg gccactcgtg gcatgttccc gacagccctt cctgtcccga gcatcactac
2160
aagcaaatgg aaggtgacag gaatgttcca cctgttcccc ctgcgtccag cacccttat
2220
aaaccacct atggaaagct actattacct ccaggcacgg atgggtggcaa agaaggcccg
2280
cgagtcctga atggcaacct acagcaggaa gacgggggac tggccggtat cacagagcag
2340
cagtcaggtg ccttcgacag atgggagatg attcaagcac aggagcttca caataagctc
2400
aaaataaaac aaaatttgca acagctgaac tctgatatca gcgccatcac tacttggctg
2460
aaaaaaactg aagcagagct ggaaatgtta aagatggcaa agcctccctc tgatatccag
2520
gaaatagaac tgagagtga gagactgcag gagatactga aagcctttga cacttacaag
2580
gcattagtgg tctctgtcaa cgtgagcagc aaggaatttc tgcaaaccga gagccccga
2640
tccacagagc tccaaagtag actccgccag ctgagcctgc tctgggaagc agcacagggc
2700
gcagtggaca gctggagagg gggcttacga cagtcgctca tgcaagtcca ggacttcac
2760

cagttgagtc aaaatctgct gctgtgggta gcgagtgcc aagaaccggag gcagaaggct
2820
catgtcaccg atccaaaggc agacccccgg gctctcctag agtgtcggag ggaactaatg
2880
caactggaaa aggagctggt agaacgtcaa cctcaagtgg acatgtttaca ggagatttca
2940
aacagccttc tcattaaggg acatggagaa gactgtattg aagctgaaga aaagggtgcat
3000
gttattgaga agaaactcaa acagttacgg gagcaagtgt cccaagattt aatggccttg
3060
cagggaaacc agaaccacgc ctcacccctg cccagcttcg acgaggtaga ctcgggggac
3120
cagcctcctg caacatccgt gccagctccc cgagcaaagc agttcagagc agtgagaact
3180
acagaaggcg aggaggagac agagagcagg gtccccggca gcacacggcc acagcgtccc
3240
ttcctctcaa ggggtgggccg ggcagcccta cccctgcagc tgctcctcct gctgctgctg
3300
ctcctggcct gcctgctgcc ctctccgaa gaagactaca gctgcactca ggccaacaac
3360
tttgcccggt ccttttacc catgctgagg tacaccaatg ggccaccccc cacatagagg
3420
gcatagctgg ccacagtgt acaccacctg cctgattgcc aagggtgccc agcacgtggc
3480
cccagaccaa tctgagtgtac ttagtggttg caagggtccc ggacctgtgc agacttcttc
3540
tgggcttacc cagcacgggc tccttgagc ccagggcagc tttcagattg tgttcctccc
3600
caggagcagg gaacctgtgt ggcagggtgcc cggggtattt tggcagaact agttgattag
3660
tttagggatc tctggaaatg tcagtttct gaagagccaa gcactttgtg aattctgggt
3720
tgtttgtaaa acagcattat tataatgtag gtatgggtcaa tgagcagtgg tgtccatcac
3780
atatattata gaagcaagcg agcacattcc accctagaaa tgggttcagaa actcataggg
3840
acccttagct gatggaaaca atcaatcata tttaatacgc ttagaatcag ttttactcca
3900
atcagctggc aattttgagc tgccgggttat acacaaaaat gttctgttca gtacctagct
3960
ctgctctttt atattgcttt aaatttttaa agaaattata ttgcatggat gtgggtattt
4020
gtgcatattt tttacaatg cccaatctgt atgaataatg taaacttcga ttttttttta
4080
aaaaaattag attttagctg gagcttttga ctaatgtaaa gtaaatgcc aactaccgac
4140
ttgataggga tgtttttgta agttaatttt ctaagacttt ttcatatcca aagtgatgct
4200
ttgctttggg ttttaactgt ttggccacgg cgggggtggg ggcggggggg ttggtacagaa
4260
acttgaagct gtttgtgata tgtacaactc agatgtttct cattaaaaaa caaaattagc
4320
cagaaaaaaa aaaaaaaaaa a
4341

<210> 3790
 <211> 1092
 <212> PRT
 <213> Homo sapiens

<400> 3790

Met	Glu	Pro	Gln	Leu	Ala	Glu	Met	Ile	Lys	Gln	Phe	Gln	Ser	Thr	Val
1				5					10					15	
Glu	Thr	Trp	Asp	Gln	Cys	Glu	Lys	Lys	Ile	Lys	Glu	Leu	Lys	Ser	Arg
			20					25					30		
Leu	Gln	Val	Leu	Lys	Ala	Gln	Ser	Glu	Asp	Pro	Leu	Pro	Glu	Leu	His
		35					40				45				
Glu	Asp	Leu	His	Asn	Glu	Lys	Glu	Leu	Ile	Lys	Glu	Leu	Glu	Gln	Ser
	50				55					60					
Leu	Ala	Ser	Trp	Thr	Gln	Asn	Leu	Lys	Glu	Leu	Gln	Thr	Met	Lys	Ala
65				70					75					80	
Asp	Leu	Thr	Arg	His	Val	Leu	Val	Glu	Asp	Val	Met	Val	Leu	Lys	Glu
			85					90					95		
Gln	Ile	Glu	His	Leu	His	Arg	Gln	Trp	Glu	Asp	Leu	Cys	Leu	Arg	Val
			100				105					110			
Ala	Ile	Arg	Lys	Gln	Glu	Ile	Glu	Asp	Arg	Leu	Asn	Thr	Trp	Val	Val
	115						120				125				
Phe	Asn	Glu	Lys	Asn	Lys	Glu	Leu	Cys	Ala	Trp	Leu	Val	Gln	Met	Glu
	130					135				140					
Asn	Lys	Val	Leu	Gln	Thr	Val	Asp	Ile	Ser	Ile	Glu	Glu	Met	Ile	Glu
145				150					155					160	
Lys	Leu	Gln	Lys	Asp	Cys	Met	Glu	Glu	Ile	Asn	Leu	Phe	Ser	Glu	Asn
			165					170					175		
Lys	Leu	Gln	Leu	Lys	Gln	Met	Gly	Asp	Gln	Leu	Ile	Lys	Ala	Ser	Asn
		180					185					190			
Lys	Ser	Arg	Ala	Ala	Glu	Ile	Asp	Asp	Lys	Leu	Asn	Lys	Ile	Asn	Asp
	195					200					205				
Arg	Trp	Gln	His	Leu	Phe	Asp	Val	Ile	Gly	Ser	Arg	Val	Lys	Lys	Leu
	210				215						220				
Lys	Glu	Thr	Phe	Ala	Phe	Ile	Gln	Gln	Leu	Asp	Lys	Asn	Met	Ser	Asn
225				230					235					240	
Leu	Arg	Thr	Trp	Leu	Ala	Arg	Ile	Glu	Ser	Glu	Leu	Ser	Lys	Pro	Val
			245					250					255		
Val	Tyr	Asp	Val	Cys	Asp	Asp	Gln	Glu	Ile	Gln	Lys	Arg	Leu	Ala	Glu
		260					265					270			
Gln	Gln	Asp	Leu	Gln	Arg	Asp	Ile	Glu	Gln	His	Ser	Ala	Gly	Val	Glu
		275				280						285			
Ser	Val	Phe	Asn	Ile	Cys	Asp	Val	Leu	Leu	His	Asp	Ser	Asp	Ala	Cys
	290				295					300					
Ala	Asn	Glu	Thr	Glu	Cys	Asp	Ser	Ile	Gln	Gln	Thr	Thr	Arg	Ser	Leu
305				310					315					320	
Asp	Arg	Arg	Trp	Arg	Asn	Ile	Cys	Ala	Met	Ser	Met	Glu	Arg	Arg	Met
			325				330					335			
Lys	Ile	Glu	Glu	Thr	Trp	Arg	Leu	Trp	Gln	Lys	Phe	Leu	Asp	Asp	Tyr
		340				345						350			
Ser	Arg	Phe	Glu	Asp	Trp	Leu	Lys	Ser	Ala	Glu	Arg	Thr	Ala	Ala	Cys
	355				360						365				
Pro	Asn	Ser	Ser	Glu	Val	Leu	Tyr	Thr	Ser	Ala	Lys	Glu	Glu	Leu	Lys

370		375		380
Arg Phe Glu Ala Phe Gln Arg Gln Ile His Glu Arg Leu Thr Gln Leu				
385		390		400
Glu Leu Ile Asn Lys Gln Tyr Arg Arg Leu Ala Arg Glu Asn Arg Thr				
	405		410	415
Asp Thr Ala Ser Arg Leu Lys Gln Met Val His Glu Gly Asn Gln Arg				
	420		425	430
Trp Asp Asn Leu Gln Arg Arg Val Thr Ala Val Leu Arg Arg Leu Arg				
	435		440	445
His Phe Thr Asn Gln Arg Glu Glu Phe Glu Gly Thr Arg Glu Ser Ile				
	450		455	460
Leu Val Trp Leu Thr Glu Met Asp Leu Gln Leu Thr Asn Val Glu His				
465		470		480
Phe Ser Glu Ser Asp Ala Asp Asp Lys Met Arg Gln Leu Asn Gly Phe				
	485		490	495
Gln Gln Glu Ile Thr Leu Asn Thr Asn Lys Ile Asp Gln Leu Ile Val				
	500		505	510
Phe Gly Glu Gln Leu Ile Gln Lys Ser Glu Pro Leu Asp Ala Val Leu				
	515		520	525
Ile Glu Asp Glu Leu Glu Glu Leu His Arg Tyr Cys Gln Glu Val Phe				
	530		535	540
Gly Arg Val Ser Arg Phe His Arg Arg Leu Thr Ser Cys Thr Pro Gly				
545		550		560
Leu Glu Asp Glu Lys Glu Ala Ser Glu Asn Glu Thr Asp Met Glu Asp				
	565		570	575
Pro Arg Glu Ile Gln Thr Asp Ser Trp Arg Lys Arg Gly Glu Ser Glu				
	580		585	590
Glu Pro Ser Ser Pro Gln Ser Leu Cys His Leu Val Ala Pro Gly His				
	595		600	605
Glu Arg Ser Gly Cys Glu Thr Pro Val Ser Val Asp Ser Ile Pro Leu				
	610		615	620
Glu Trp Asp His Thr Gly Asp Val Gly Gly Ser Ser Ser His Glu Glu				
625		630		640
Asp Glu Glu Gly Pro Tyr Tyr Ser Ala Leu Ser Gly Lys Ser Ile Ser				
	645		650	655
Asp Gly His Ser Trp His Val Pro Asp Ser Pro Ser Cys Pro Glu His				
	660		665	670
His Tyr Lys Gln Met Glu Gly Asp Arg Asn Val Pro Pro Val Pro Pro				
	675		680	685
Ala Ser Ser Thr Pro Tyr Lys Pro Pro Tyr Gly Lys Leu Leu Leu Pro				
	690		695	700
Pro Gly Thr Asp Gly Gly Lys Glu Gly Pro Arg Val Leu Asn Gly Asn				
705		710		720
Pro Gln Gln Glu Asp Gly Gly Leu Ala Gly Ile Thr Glu Gln Gln Ser				
	725		730	735
Gly Ala Phe Asp Arg Trp Glu Met Ile Gln Ala Gln Glu Leu His Asn				
	740		745	750
Lys Leu Lys Ile Lys Gln Asn Leu Gln Gln Leu Asn Ser Asp Ile Ser				
	755		760	765
Ala Ile Thr Thr Trp Leu Lys Lys Thr Glu Ala Glu Leu Glu Met Leu				
	770		775	780
Lys Met Ala Lys Pro Pro Ser Asp Ile Gln Glu Ile Glu Leu Arg Val				
785		790		800
Lys Arg Leu Gln Glu Ile Leu Lys Ala Phe Asp Thr Tyr Lys Ala Leu				

				805					810				815				
Val	Val	Ser	Val	Asn	Val	Ser	Ser	Lys	Glu	Phe	Leu	Gln	Thr	Glu	Ser		
			820					825					830				
Pro	Glu	Ser	Thr	Glu	Leu	Gln	Ser	Arg	Leu	Arg	Gln	Leu	Ser	Leu	Leu		
		835					840					845					
Trp	Glu	Ala	Ala	Gln	Gly	Ala	Val	Asp	Ser	Trp	Arg	Gly	Gly	Leu	Arg		
	850					855					860						
Gln	Ser	Leu	Met	Gln	Cys	Gln	Asp	Phe	His	Gln	Leu	Ser	Gln	Asn	Leu		
865				870						875				880			
Leu	Leu	Trp	Leu	Ala	Ser	Ala	Lys	Asn	Arg	Arg	Gln	Lys	Ala	His	Val		
			885					890						895			
Thr	Asp	Pro	Lys	Ala	Asp	Pro	Arg	Ala	Leu	Leu	Glu	Cys	Arg	Arg	Glu		
		900						905					910				
Leu	Met	Gln	Leu	Glu	Lys	Glu	Leu	Val	Glu	Arg	Gln	Pro	Gln	Val	Asp		
	915						920					925					
Met	Leu	Gln	Glu	Ile	Ser	Asn	Ser	Leu	Leu	Ile	Lys	Gly	His	Gly	Glu		
	930					935					940						
Asp	Cys	Ile	Glu	Ala	Glu	Glu	Lys	Val	His	Val	Ile	Glu	Lys	Lys	Leu		
945					950					955					960		
Lys	Gln	Leu	Arg	Glu	Gln	Val	Ser	Gln	Asp	Leu	Met	Ala	Leu	Gln	Gly		
			965					970						975			
Thr	Gln	Asn	Pro	Ala	Ser	Pro	Leu	Pro	Ser	Phe	Asp	Glu	Val	Asp	Ser		
		980						985					990				
Gly	Asp	Gln	Pro	Pro	Ala	Thr	Ser	Val	Pro	Ala	Pro	Arg	Ala	Lys	Gln		
	995						1000					1005					
Phe	Arg	Ala	Val	Arg	Thr	Thr	Glu	Gly	Glu	Glu	Glu	Thr	Glu	Ser	Arg		
	1010					1015					1020						
Val	Pro	Gly	Ser	Thr	Arg	Pro	Gln	Arg	Ser	Phe	Leu	Ser	Arg	Val	Val		
1025					1030					1035					1040		
Arg	Ala	Ala	Leu	Pro	Leu	Gln	Leu	Leu	Leu	Leu	Leu	Leu	Leu	Leu	Leu		
			1045					1050					1055				
Ala	Cys	Leu	Leu	Pro	Ser	Ser	Glu	Glu	Asp	Tyr	Ser	Cys	Thr	Gln	Ala		
		1060						1065					1070				
Asn	Asn	Phe	Ala	Arg	Ser	Phe	Tyr	Pro	Met	Leu	Arg	Tyr	Thr	Asn	Gly		
	1075						1080						1085				
Pro	Pro	Pro	Thr														
	1090																

<210> 3791

<211> 1011

<212> DNA

<213> Homo sapiens

<400> 3791

tgatcagggtc acacacacgg tatactgtgt ctggcagctc atcaagacgg tggaagcagc
 60
 ctggcaacat agtatctgtg aaagtgtgga gctcatcttg ttccaacggg tcagcatccc
 120
 tgaaccttct ttaaaccattt agcctcttcc tctctctgct tttcccgagc tttccgttcc
 180
 tcttctctct tccggcaagc aacttcttca ggtgactctg ccctttgatc cattggaata
 240
 tctgttccca gagacatagc aattgctctc atcatctggt cctcttcaga catgctgaga
 300

tcccgaacaa ctctcccat gattggagga ggggtgggta aaagggtactc tgtggcctgc
 360
 tccatgggtgc tgggtgttcaa cagtgcctcc attgcatggt cccttgtgaa gcccatgtcc
 420
 atgagctggt gcagttgttg ctggttgact tgaggttccc ggcgggagcc accttctct
 480
 tgccctgtat cctcttctcc tcgagacccc tccttctcct tgcttagtct ctctcgaatc
 540
 acaggttctc ctcgagggat gtggcataga atggccagca tcgattcagc cattcgtcca
 600
 ccatatacct tcaggggttt ccggttccat aagtttttga tgcaagtaaa ggctgctttc
 660
 tgagttacca caaggaagcg cagtgcactg aactggggaa agttctggac acctccaggc
 720
 aatttggcag gcagcgaatg tggagattca agcaccgtgg tgggattcac catcttctcc
 780
 accagcataa gccaggcatc taggaattct cctgtgccat caggcaagtc tgagtgttcc
 840
 aatccctcag aaacaggaac tttacctccc atggacagag cccagttgaa agtttcaaaa
 900
 agagcattgt ggcctccgga gcagagaaat ttttgcagca tgaggtggta gggatacttc
 960
 ctctcatcaa acagcattgg ggatgtgaaa ccaactgaac agatgaagaa t
 1011

<210> 3792

<211> 288

<212> PRT

<213> Homo sapiens

<400> 3792

Met	Leu	Phe	Asp	Glu	Arg	Lys	Tyr	Pro	Tyr	His	Leu	Met	Leu	Gln	Lys
1				5					10					15	
Phe	Leu	Cys	Ser	Gly	Gly	His	Asn	Ala	Leu	Phe	Glu	Thr	Phe	Asn	Trp
			20					25					30		
Ala	Leu	Ser	Met	Gly	Gly	Lys	Val	Pro	Val	Ser	Glu	Gly	Leu	Glu	His
			35				40					45			
Ser	Asp	Leu	Pro	Asp	Gly	Thr	Gly	Glu	Phe	Leu	Asp	Ala	Trp	Leu	Met
			50			55					60				
Leu	Val	Glu	Lys	Met	Val	Asn	Pro	Thr	Thr	Val	Leu	Glu	Ser	Pro	His
					70					75				80	
Ser	Leu	Pro	Ala	Lys	Leu	Pro	Gly	Gly	Val	Gln	Asn	Phe	Pro	Gln	Phe
				85					90					95	
Ser	Ala	Leu	Arg	Phe	Leu	Val	Val	Thr	Gln	Lys	Ala	Ala	Phe	Thr	Cys
			100					105					110		
Ile	Lys	Asn	Leu	Trp	Asn	Arg	Lys	Pro	Leu	Lys	Val	Tyr	Gly	Gly	Arg
			115				120					125			
Met	Ala	Glu	Ser	Met	Leu	Ala	Ile	Leu	Cys	His	Ile	Leu	Arg	Gly	Glu
			130			135					140				
Pro	Val	Ile	Arg	Glu	Arg	Leu	Ser	Lys	Glu	Lys	Glu	Gly	Ser	Arg	Gly
					150					155					160
Glu	Glu	Asp	Thr	Gly	Gln	Glu	Glu	Gly	Gly	Ser	Arg	Arg	Glu	Pro	Gln
				165				170					175		
Val	Asn	Gln	Gln	Gln	Leu	Gln	Gln	Leu	Met	Asp	Met	Gly	Phe	Thr	Arg

			180					185					190				
Glu	His	Ala	Met	Glu	Ala	Leu	Leu	Asn	Thr	Ser	Thr	Met	Glu	Gln	Ala		
		195						200				205					
Thr	Glu	Tyr	Leu	Leu	Thr	His	Pro	Pro	Pro	Ile	Met	Gly	Gly	Val	Val		
	210					215					220						
Arg	Asp	Leu	Ser	Met	Ser	Glu	Glu	Asp	Gln	Met	Met	Arg	Ala	Ile	Ala		
225					230					235					240		
Met	Ser	Leu	Gly	Gln	Asp	Ile	Pro	Met	Asp	Gln	Arg	Ala	Glu	Ser	Pro		
			245						250					255			
Glu	Glu	Val	Ala	Cys	Arg	Lys	Glu	Glu	Glu	Glu	Arg	Lys	Ala	Arg	Glu		
		260						265					270				
Lys	Gln	Glu	Glu	Glu	Ala	Lys	Cys	Leu	Lys	Lys	Val	Gln	Gly	Cys			
	275					280					285						

<210> 3793

<211> 360

<212> DNA

<213> Homo sapiens

<400> 3793

```

nnnatctgcc cacacttata tatgtgagtg tacacacaca cagagtgtgt gtgtgtgtgt
60
gtgtgtgtgt gtgtgtgtgt atttatatatt cagatcacag gcagatttct gggctctctgt
120
tactttgtgc cgggtaggaa caacagtttc tttttttctt ggagacagtg tttcactctt
180
gttgcccagg ctggagggca atggcgcgat ctcagctcac tgcaacctcc gcctttcggg
240
ctcaagagat tctcctgcct cagcctccca agtagctggg attacaggca tgcacacca
300
tgcaccatgc ccgactaatt ttgtattttt agtagagaca gggtttctcc atgttggtca
360

```

<210> 3794

<211> 96

<212> PRT

<213> Homo sapiens

<400> 3794

Val	Tyr	Thr	His	Thr	Glu	Cys	Val	Cys	Val	Cys	Val	Cys	Val	Cys	Val		
1				5				10					15				
Cys	Val	Phe	Ile	Phe	Gln	Ile	Thr	Gly	Arg	Phe	Leu	Gly	Leu	Cys	Tyr		
		20						25				30					
Phe	Val	Pro	Gly	Arg	Asn	Asn	Ser	Phe	Phe	Phe	Ser	Trp	Arg	Gln	Cys		
	35					40					45						
Phe	Thr	Leu	Val	Ala	Gln	Ala	Gly	Gly	Gln	Trp	Arg	Asp	Leu	Ser	Ser		
	50				55				60								
Leu	Gln	Pro	Pro	Pro	Phe	Gly	Leu	Lys	Arg	Phe	Ser	Cys	Leu	Ser	Leu		
65					70				75					80			
Pro	Ser	Ser	Trp	Asp	Tyr	Arg	His	Ala	Ser	Pro	Cys	Thr	Met	Pro	Asp		
			85					90					95				

<210> 3795

<211> 1341

<212> DNA

<213> Homo sapiens

<400> 3795

aactgcctgt acaagaaggg ccctgatggc tatgaccccc agttcataac caagctgctc
60
cgcaactaca ggtctcatcc caccatcctg gacattccta accagctcta ttatgaaggg
120
gagctgcagg cctgtgctga tgtcgtggat cgagaacgct tctgccgctg ggcgggccta
180
cctcgacagg gctttcccat catctttcac ggcgtaatgg gcaaagatga gcgtaaggc
240
aacagcccat ccttcttcaa ccctgaagag gctgccacag tgacttcta cctgaagctg
300
ctcctggccc cctcctccaa gaagggcaaa gccgcctga gccctcgaag tgtgggcgtc
360
atctccccgt accggaaaca ggtggagaaa atccgttact gcatcaccaa acttgacagg
420
gagcttcgag gactggatga catcaaggac ttgaagggtg gttcagtaga agaattccaa
480
ggccaagaac gaagcgtcat cctcatctcc accgtgcgaa gcagccagag ctttgtgcag
540
ctggatctgg actttaatct gggtttcctt aagaacccca agaggttcaa tgtagctgtg
600
accggggcca aggccctgct catcatcgtg gggaaccccc ttctcctggg ccatgaccct
660
gactggaaag tattcctgga gttctgtaaa gaaaacggag ggtataccgg gtgtcccttc
720
cctgccaaac tggacctgca acagggacag aatttactgc aaggctctgag caagctcagc
780
ccctctacct cagggcccca cagccatgac tacctcccc aggagcggga gggtaaggg
840
ggcctgtctc tgcaagtgga gccagagtgg aggaatgagc tctgaagaca cagcaccag
900
ccttctcgca ccagccaagc cttaactgcc tgctgaccc tgaaccagaa ccagctgaa
960
ctgccccctc aaggacagc aaggctgggg gagggagttt acaacccaag ccattccacc
1020
ccctccccctg ctggggagaa tgacacatca agctgctaac aattggggga aggggaagga
1080
agaaaactct gaaaacaaaa tcttgttcta tgcaaaagcc ttgataatgt ctctctgcc
1140
tgccccagc ttctgagcc cctaagctga ccctgtaggg aagggtggga ctttcagccc
1200
tgctgagggt cccatcccc tccagtggga gaggaacca gccccacac tcgggggagg
1260
aaaccagtg ggaggtggca gggaagccac ccacaggttt ctaagtttag cccctgcta
1320
cagaccactc ccttcacgcg t
1341

<210> 3796

<211> 294

<212> PRT

<213> Homo sapiens

<400> 3796

```

Asn Cys Leu Tyr Lys Lys Gly Pro Asp Gly Tyr Asp Pro Gln Phe Ile
 1           5           10           15
Thr Lys Leu Leu Arg Asn Tyr Arg Ser His Pro Thr Ile Leu Asp Ile
          20           25           30
Pro Asn Gln Leu Tyr Tyr Glu Gly Glu Leu Gln Ala Cys Ala Asp Val
          35           40           45
Val Asp Arg Glu Arg Phe Cys Arg Trp Ala Gly Leu Pro Arg Gln Gly
          50           55           60
Phe Pro Ile Ile Phe His Gly Val Met Gly Lys Asp Glu Arg Glu Gly
65           70           75           80
Asn Ser Pro Ser Phe Phe Asn Pro Glu Glu Ala Ala Thr Val Thr Ser
          85           90           95
Tyr Leu Lys Leu Leu Leu Ala Pro Ser Ser Lys Lys Gly Lys Ala Arg
          100          105          110
Leu Ser Pro Arg Ser Val Gly Val Ile Ser Pro Tyr Arg Lys Gln Val
          115          120          125
Glu Lys Ile Arg Tyr Cys Ile Thr Lys Leu Asp Arg Glu Leu Arg Gly
          130          135          140
Leu Asp Asp Ile Lys Asp Leu Lys Val Gly Ser Val Glu Glu Phe Gln
145          150          155          160
Gly Gln Glu Arg Ser Val Ile Leu Ile Ser Thr Val Arg Ser Ser Gln
          165          170          175
Ser Phe Val Gln Leu Asp Leu Asp Phe Asn Leu Gly Phe Leu Lys Asn
          180          185          190
Pro Lys Arg Phe Asn Val Ala Val Thr Arg Ala Lys Ala Leu Leu Ile
          195          200          205
Ile Val Gly Asn Pro Leu Leu Leu Gly His Asp Pro Asp Trp Lys Val
          210          215          220
Phe Leu Glu Phe Cys Lys Glu Asn Gly Gly Tyr Thr Gly Cys Pro Phe
225          230          235          240
Pro Ala Lys Leu Asp Leu Gln Gln Gly Gln Asn Leu Leu Gln Gly Leu
          245          250          255
Ser Lys Leu Ser Pro Ser Thr Ser Gly Pro His Ser His Asp Tyr Leu
          260          265          270
Pro Gln Glu Arg Glu Gly Glu Gly Gly Leu Ser Leu Gln Val Glu Pro
          275          280          285
Glu Trp Arg Asn Glu Leu
          290

```

<210> 3797

<211> 1970

<212> DNA

<213> Homo sapiens

<400> 3797

```

nnggaaccgc cgcgtgccag cccggccagg cacccttgca gcatggcctg gaacaccaac
60
ctccgctggc ggctgccgct cacctgcctg ctctgcagg tgattatggt gattctcttc
120
ggggtgttcg tgcgctacga cttcgaggcc gacgccact ggtggtcaga gaggacgcac
180

```

aagaacttga gcgacatgga gaacgaattc tactatcgct acccaagctt ccaggacgtg
240
cacgtgatgg tcttcgtggg cttcggttc ctcagtactt tctgcagcg ctacggcttc
300
agcgccgtgg gcttcaactt cctgttgga gccttcggca tccagtgggc gctgctcatg
360
cagggctggt tccacttctt acaagaccgc tacatcgctg tgggcgtgga gaacctcatc
420
aacgctgact tctgcgtggc ctctgtctgc gtggcctttg gggcagttct gggtaaagtc
480
agccccattc agctgctcat catgactttc ttccaagtga ccctcttcgc tgtgaatgag
540
ttcattctcc ttaacctgct aaaggatgaag gatgcaggag gctccatgac catccacaca
600
tttggcgctt actttgggct cacagtgacc cggatcctct accgacgcaa cctagagcag
660
agcaaggaga gacagaattc tgtgtaccag tcggacctct ttgcatgat tggcaccctc
720
ttctgtgga tgtactggcc cagcttcaac tcagccatat cctaccatgg ggacagccag
780
caccgagccg ccatcaacac ctactgctcc ttggcagcct gcgtgcttac ctcggtggca
840
atatccagtg ccctgcacaa gaagggcaag ctggacatgg tgcacatcca gaatgccacg
900
ctcgagcagg ggggtggcgt ggggtaccgt gctgagatga tgetcatgcc ttacgggtgcc
960
ctcatcatcg gcttcgtctg cggcatcatc tccaccctgg gttttgtata cctgacccca
1020
ttctggagt cccggctgca catccaggac acatgtggca ttaacaatct gcatggcatt
1080
cctggcatca taggcggcat cgtgggtgct gtgacagcgg cctccgccag ccttgaagtc
1140
tatggaaaag aagggttgt ccattccttt gactttcaag gtttcaacgg ggactggacc
1200
gcaagaacac agggaaagt ccagatttat ggtctcttgg tgaccctggc catggccctg
1260
atgggtggca tcattgtggg gctcattttg agattacat tctggggaca accttcagat
1320
gagaactgct ttgaggatgc ggtctactgg gagatgcctg aagggaacag cactgtctac
1380
atccctgagg accccacctt caagccctca ggaccctcag taccctcagt acctatggtg
1440
tccccactac ccatggcttc ctcggtaccc ttggtaccct aggcctccag ggcagggtgag
1500
gagcaggctc cacagactgt cctggggccc agaggagctg gtgctgacct agctagggat
1560
gcaagagtga gcaagcagca cccccacctg ctggcttggc ctcaaggtgc ctccaccct
1620
gccctccctt tcatccagg gggctctgct gagaatggag aaggagaagc taaaagtgg
1680
gcatccaagc cgggttctgg ctgcagaagt tctgcctctg cctggggtct tggccacatt
1740
ggagaaaaac aggcctcaaag tggggctggg acctgggtggg tgaacctgag ctctccagg
1800

agacaactta gctgccagtc accacctatg aggcctcttct accccgtgcc tgcacctcgg
 1860
 ccagcatctc ctatgctccc tgggtccccc agacctctct gtgttggtgtg cgtggcagcc
 1920
 tccaggaata aacattcttg ttgtcctttg taaaaaaaaa aaaaaaaaaa
 1970

<210> 3798

<211> 473

<212> PRT

<213> Homo sapiens

<400> 3798

Leu	Arg	Trp	Arg	Leu	Pro	Leu	Thr	Cys	Leu	Leu	Leu	Gln	Val	Ile	Met
1				5					10					15	
Val	Ile	Leu	Phe	Gly	Val	Phe	Val	Arg	Tyr	Asp	Phe	Glu	Ala	Asp	Ala
			20					25					30		
His	Trp	Trp	Ser	Glu	Arg	Thr	His	Lys	Asn	Leu	Ser	Asp	Met	Glu	Asn
			35				40					45			
Glu	Phe	Tyr	Tyr	Arg	Tyr	Pro	Ser	Phe	Gln	Asp	Val	His	Val	Met	Val
			50			55					60				
Phe	Val	Gly	Phe	Gly	Phe	Leu	Met	Thr	Phe	Leu	Gln	Arg	Tyr	Gly	Phe
65					70					75				80	
Ser	Ala	Val	Gly	Phe	Asn	Phe	Leu	Leu	Ala	Ala	Phe	Gly	Ile	Gln	Trp
				85					90					95	
Ala	Leu	Leu	Met	Gln	Gly	Trp	Phe	His	Phe	Leu	Gln	Asp	Arg	Tyr	Ile
			100					105					110		
Val	Val	Gly	Val	Glu	Asn	Leu	Ile	Asn	Ala	Asp	Phe	Cys	Val	Ala	Ser
		115				120						125			
Val	Cys	Val	Ala	Phe	Gly	Ala	Val	Leu	Gly	Lys	Val	Ser	Pro	Ile	Gln
		130				135					140				
Leu	Leu	Ile	Met	Thr	Phe	Phe	Gln	Val	Thr	Leu	Phe	Ala	Val	Asn	Glu
145					150					155				160	
Phe	Ile	Leu	Leu	Asn	Leu	Leu	Lys	Val	Lys	Asp	Ala	Gly	Gly	Ser	Met
				165					170					175	
Thr	Ile	His	Thr	Phe	Gly	Ala	Tyr	Phe	Gly	Leu	Thr	Val	Thr	Arg	Ile
			180					185					190		
Leu	Tyr	Arg	Arg	Asn	Leu	Glu	Gln	Ser	Lys	Glu	Arg	Gln	Asn	Ser	Val
		195				200						205			
Tyr	Gln	Ser	Asp	Leu	Phe	Ala	Met	Ile	Gly	Thr	Leu	Phe	Leu	Trp	Met
	210				215						220				
Tyr	Trp	Pro	Ser	Phe	Asn	Ser	Ala	Ile	Ser	Tyr	His	Gly	Asp	Ser	Gln
225					230					235				240	
His	Arg	Ala	Ala	Ile	Asn	Thr	Tyr	Cys	Ser	Leu	Ala	Ala	Cys	Val	Leu
				245					250					255	
Thr	Ser	Val	Ala	Ile	Ser	Ser	Ala	Leu	His	Lys	Lys	Gly	Lys	Leu	Asp
			260					265					270		
Met	Val	His	Ile	Gln	Asn	Ala	Thr	Leu	Ala	Gly	Gly	Val	Ala	Val	Gly
		275					280					285			
Thr	Ala	Ala	Glu	Met	Met	Leu	Met	Pro	Tyr	Gly	Ala	Leu	Ile	Ile	Gly
	290					295					300				
Phe	Val	Cys	Gly	Ile	Ile	Ser	Thr	Leu	Gly	Phe	Val	Tyr	Leu	Thr	Pro
305					310					315				320	
Phe	Leu	Glu	Ser	Arg	Leu	His	Ile	Gln	Asp	Thr	Cys	Gly	Ile	Asn	Asn


```

          325          330          335
Leu His Gly Ile Pro Gly Ile Ile Gly Gly Ile Val Gly Ala Val Thr
          340          345          350
Ala Ala Ser Ala Ser Leu Glu Val Tyr Gly Lys Glu Gly Leu Val His
          355          360          365
Ser Phe Asp Phe Gln Gly Phe Asn Gly Asp Trp Thr Ala Arg Thr Gln
          370          375          380
Gly Lys Phe Gln Ile Tyr Gly Leu Leu Val Thr Leu Ala Met Ala Leu
385          390          395          400
Met Gly Gly Ile Ile Val Gly Leu Ile Leu Arg Leu Pro Phe Trp Gly
          405          410          415
Gln Pro Ser Asp Glu Asn Cys Phe Glu Asp Ala Val Tyr Trp Glu Met
          420          425          430
Pro Glu Gly Asn Ser Thr Val Tyr Ile Pro Glu Asp Pro Thr Phe Lys
          435          440          445
Pro Ser Gly Pro Ser Val Pro Ser Val Pro Met Val Ser Pro Leu Pro
          450          455          460
Met Ala Ser Ser Val Pro Leu Val Pro
465          470

```

<210> 3799

<211> 210

<212> DNA

<213> Homo sapiens

<400> 3799

```

tcgaggaact gctcggcctc cacatcccaa gcctcacctt ctccctgcat cacagagaga
60
agcaagcaga aggcccggag gagaacaaga tccagctcct cctcctcttc ttccagttct
120
tctagctcct cttcttctctc ctgctctctc tctcttctct ccagtgatgg ccggaagaag
180
cgggggaagt acaaggacaa gaggaggaag
210

```

<210> 3800

<211> 70

<212> PRT

<213> Homo sapiens

<400> 3800

```

Ser Arg Asn Cys Ser Ala Ser Thr Ser Gln Ala Ser Pro Ser Pro Cys
1          5          10          15
Ile Thr Glu Arg Ser Lys Gln Lys Ala Arg Arg Arg Thr Arg Ser Ser
20          25          30
Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser
35          40          45
Ser Ser Ser Ser Ser Ser Ser Asp Gly Arg Lys Lys Arg Gly Lys Tyr
50          55          60
Lys Asp Lys Arg Arg Lys
65          70

```

<210> 3801

<211> 4070

<212> DNA

<213> Homo sapiens

<400> 3801

ngctagccccg gcggcaagca ctgacgtgtc tctcggcgga gctgctgtgc agtggaacgc
60
gctggggccgc gggcagcgtc gcctcacgcg gagcagagct gagctgaagc gggacccgga
120
gcccagagcag ccgcccgcct ggcaatcaaa tttctggaag tcatcaagcc cttctgtgtc
180
atcctgccgg aaattcagaa gccagagagg aagattcagt ttaaggagaa agtgctgtgg
240
accgctatca ccctctttat cttcttagtg tgctgccaga ttcccctggt tgggatcatg
300
tcttcagatt cagctgaccc tttctattgg atgagagtga ttctagcctc taacagaggc
360
acattgatgg agctagggat ctctcctatt gtcacgtctg gccttataat gcaactcttg
420
gctggcgcca agataattga agttggtgac accccaaaag accgagctct cttcaacgga
480
gcccaaaagt tatttggcat gatcattact atcggccagt ctatcgtgta tgtgatgacc
540
gggatgtatg gggacccttc tgaaatgggt gctggaattt gcctgctaata catcattcag
600
ctctttgttg ctggtttgat tgtcctactt ttggatgagc tgctacagaa gggttacggc
660
ttgggggtctg ggatttccct ctttattgcc accaacatct gtgagaccat tgtctggaag
720
gcctttagtc ccactaccat taacactggc agaggtagtg agtttgaggg tgcagtcata
780
gctctgttcc atttgttggc caccaggacg gacaaagtcc gagctttacg ggaggctttt
840
tatcggcaga acttacccaa cctcatgaat ctcatcgcca ccatctttgt ctttgcagtg
900
gtcatctatt tccagggcct ccgagtggac ctgccaatca agtcggcccc ctaccgtggc
960
cagtacaaca cctatcccat caagctcttc tatacgtcca acatccccat catcctgcag
1020
tcggccctgg tgtccaacct ttatgttatt tcccaaagtc tctcagctcg atttagtggc
1080
aacttttttag taaatttact aggacagtgg tcggacacgt cttctggggg cccagcacgt
1140
gcttatccag ttggtggcct ttgctattac ctgtcccctc cagaatcttt tggtccgctg
1200
ttagaagacc cgggtccatgc agttgtatac atagtgttca tgctgggctc ctgtgcattc
1260
ttctccaaaa cgtggattga ggtctcaggt tcctctgcca aagatgttgc aaagcagctg
1320
aaggagcagc agatggtgat gagaggccac cgagagacct ccatggtcca tgaactcaac
1380
cgttacatcc ccacagccgc ggccttttgt gggctgtgca tcggggccct ctcggtcctg
1440
gctgacttcc taggcgccat tgggtctgga accgggatcc tgctcgagc cacaatcatc
1500

taccagtact ttgagatctt cgттаaggag caaagcgagg ttggcagcat gggggccctg
1560
ctcttctgag cccgtctccc ggacagggtg aggaagctgc tccagaagcg cctcggaagg
1620
ggagctctca tcatggcgcg tgctgctgcg gcatatggac ttttaataat gtttttgaat
1680
ttcgtattct ttcattccac tgtgtaaagt gctagacatt ttccaattta aaattttgct
1740
ttttatcctg gcactggcaa aaagaactgt gaaagtgaaa ttttattcag ccgactgcca
1800
gagaagtggg aatggatatag gattgtcccc aagtgtccat gtaacttttg ttttaacctt
1860
tgcaccttct cagtgtgta tgcggctgca gccgtctcac ctgtttcccc acaaagggaa
1920
ttttcactc tggttggaag cacaacact gaaatgtcta cgtttcattt tggcagtagg
1980
gtgtgaagct gggagcagat catgtatttc ccggagacat gggacctgc tggcatgtct
2040
ccttcacaat caggcgaggg aatatctggc ttaggactgt ttctctctaa gacaccattg
2100
ttttccctta ttttaaaagt gattttttta aggacagaac ttcttccaaa agagagggat
2160
ggctttccca gaagacactc ctggccatct gtggatttgt ctgtgcacct attggctctt
2220
ctagctgact cttctgggtg ggcttagagt ctgcctgttt ctgctagctc cgtgttttagt
2280
ccacttgggt catcagctct gccaaactga gcctggccaa gctaggtgga cagacccttg
2340
cagtgatgtc cgtttgtcca gattctgcca gtcactactg gacacgtctc ctgcgagctg
2400
ccctagcaag gggagacatt gtggtagcta tcagacatgg acagaaactg acttagtgct
2460
cacaagcccc tacaccttct gggtgaaga tcaccagct gtgttcagaa ttttcttact
2520
gtgcttagga ctgcacgcaa gtgagcagac accaccgact tcctttctgc gtcaccagtg
2580
tcgtcagcag agagaggaca gcacaggctc aagggttgga gtgaagtcag gttcggggtg
2640
catgggctgt ggtgggtgtg atcagttgct ccagtgtttg aaataagaag actcatgttt
2700
atgtctggaa taagttctgt ttgtgctgac aggtggccta ggtcctggag atgagcacc
2760
tctctctggc ctttagggag tccccctta ggacaggcac tgcccagcag caagggcagc
2820
agagttgggt gctaagatcc tgaggagctc gaggtttcga gctggcttta gacattgggt
2880
ggaccaagga tgttttgcag gatgcctga tcctaagaag ggggcctggg ggtgcgtgca
2940
gcctgtcggg gagacccac tctgacagtg ggcacacggc agcctgcaaa gcacagggcc
3000
accgccacag cccggcagag gggcacactc tggagacctt gctggcagtg ctagccagga
3060
aacagagtga ccaagggaca agaagggact tgcctaaagc caccagcaa ctacgagca
3120

gaaccaagat gggccccagg ctccctccata tggcccaggg cttaccaccc tatcacacgt
 3180
 ggccttgtct agacccagtc ctgagcaggg gagaggctct tgagacctga tgccctccta
 3240
 cccacatggt tctcccaactg ccctgtctgc tctgtctgcta cagaggggca gggcctcccc
 3300
 cagcccacgc ttaggaatgc ttggcctctg gcaggcaggg agctgtaccc aagctggtgg
 3360
 gcagggggct ggaaggcacc aggcctcagg aggagcccca tagtcccgcc tgcagcctgt
 3420
 aaccatcggc tgggccctgc aaggcccaca ctacgcctt gtgggtgatg gtcacggtgg
 3480
 gtgggtgggg gctgacccca gcttcagggg gactgtcact gtggacgcca aaatggcata
 3540
 actgagataa ggtgaataag tgacaaataa agccagtttt ttacaaggta cttgatcatg
 3600
 ttctcttaat cttaaattag attttattcc caaaaaggcc agtgaggcgc aaagcttggt
 3660
 tgcagcttta tgtgtgtcaa aggcttggtt ggcgactca ggcattttgc ctggaaaagt
 3720
 tcccttctga tggatcatgtc aacctggtgc tcacatttgt gataaagtga tatgggtgct
 3780
 gggccacatg tggagctgct gcagggtctt gcccgtaggg cagagtgcac tggctgtccc
 3840
 gtgagaatgc agaggcctcc gctgagccag ggcgctgcc accccgtgga agagtgggaa
 3900
 ccttctagca ggagcctagg gcccataac tcgaagcctt ttgagcctca gctccagtac
 3960
 ccagctggtg attggagaag tcttaacttg gttgtgaggg tggcctcaga cccgacctgt
 4020
 agccaagcca gaaggaccca gtgttgtgtg ggtgggagtg gcaggcttgt
 4070

<210> 3802

<211> 476

<212> PRT

<213> Homo sapiens

<400> 3802

Met	Ala	Ile	Lys	Phe	Leu	Glu	Val	Ile	Lys	Pro	Phe	Cys	Val	Ile	Leu
1				5					10					15	
Pro	Glu	Ile	Gln	Lys	Pro	Glu	Arg	Lys	Ile	Gln	Phe	Lys	Glu	Lys	Val
			20					25					30		
Leu	Trp	Thr	Ala	Ile	Thr	Leu	Phe	Ile	Phe	Leu	Val	Cys	Cys	Gln	Ile
		35					40					45			
Pro	Leu	Phe	Gly	Ile	Met	Ser	Ser	Asp	Ser	Ala	Asp	Pro	Phe	Tyr	Trp
	50					55					60				
Met	Arg	Val	Ile	Leu	Ala	Ser	Asn	Arg	Gly	Thr	Leu	Met	Glu	Leu	Gly
65				70					75					80	
Ile	Ser	Pro	Ile	Val	Thr	Ser	Gly	Leu	Ile	Met	Gln	Leu	Leu	Ala	Gly
			85					90						95	
Ala	Lys	Ile	Ile	Glu	Val	Gly	Asp	Thr	Pro	Lys	Asp	Arg	Ala	Leu	Phe
			100					105						110	
Asn	Gly	Ala	Gln	Lys	Leu	Phe	Gly	Met	Ile	Ile	Thr	Ile	Gly	Gln	Ser

115	Ile Val Tyr Val Met Thr Gly Met Tyr Gly Asp Pro Ser Glu Met Gly	120	125
130	Ala Gly Ile Cys Leu Leu Ile Ile Ile Gln Leu Phe Val Ala Gly Leu	135	140
145	Ile Val Leu Leu Leu Asp Glu Leu Leu Gln Lys Gly Tyr Gly Leu Gly	150	155
165	Ser Gly Ile Ser Leu Phe Ile Ala Thr Asn Ile Cys Glu Thr Ile Val	170	175
180	Trp Lys Ala Phe Ser Pro Thr Thr Ile Asn Thr Gly Arg Gly Thr Glu	185	190
195	Phe Glu Gly Ala Val Ile Ala Leu Phe His Leu Leu Ala Thr Arg Thr	200	205
210	Asp Lys Val Arg Ala Leu Arg Glu Ala Phe Tyr Arg Gln Asn Leu Pro	215	220
225	Asn Leu Met Asn Leu Ile Ala Thr Ile Phe Val Phe Ala Val Val Ile	230	235
245	Tyr Phe Gln Gly Phe Arg Val Asp Leu Pro Ile Lys Ser Ala Arg Tyr	250	255
260	Arg Gly Gln Tyr Asn Thr Tyr Pro Ile Lys Leu Phe Tyr Thr Ser Asn	265	270
275	Ile Pro Ile Ile Leu Gln Ser Ala Leu Val Ser Asn Leu Tyr Val Ile	280	285
290	Ser Gln Met Leu Ser Ala Arg Phe Ser Gly Asn Phe Leu Val Asn Leu	295	300
305	Leu Gly Gln Trp Ser Asp Thr Ser Ser Gly Gly Pro Ala Arg Ala Tyr	310	315
325	Pro Val Gly Gly Leu Cys Tyr Tyr Leu Ser Pro Pro Glu Ser Phe Gly	330	335
340	Ser Val Leu Glu Asp Pro Val His Ala Val Val Tyr Ile Val Phe Met	345	350
355	Leu Gly Ser Cys Ala Phe Phe Ser Lys Thr Trp Ile Glu Val Ser Gly	360	365
370	Ser Ser Ala Lys Asp Val Ala Lys Gln Leu Lys Glu Gln Gln Met Val	375	380
385	Met Arg Gly His Arg Glu Thr Ser Met Val His Glu Leu Asn Arg Tyr	390	395
405	Ile Pro Thr Ala Ala Ala Phe Gly Gly Leu Cys Ile Gly Ala Leu Ser	410	415
420	Val Leu Ala Asp Phe Leu Gly Ala Ile Gly Ser Gly Thr Gly Ile Leu	425	430
435	Leu Ala Val Thr Ile Ile Tyr Gln Tyr Phe Glu Ile Phe Val Lys Glu	440	445
450	Gln Ser Glu Val Gly Ser Met Gly Ala Leu Leu Phe	455	460
465		470	475

<210> 3803

<211> 345

<212> DNA

<213> Homo sapiens

<400> 3803

ccaagaggaa actccttgaa gaggctacag gaagaaacag gtgctaaaat gtctatcctg
60

ggcaaaggat caatgagaga taaagctaag gaagaagaac taaggaagag tggggaagcc
 120
 aaatatgccc acttgagtga tgagcttcat gtattaattg aagtgtttgc tccacctggg
 180
 gaagcttatt cacgtatgag tcatgcattg gaagagatta aaaaattcct ggttcctgac
 240
 tacaatgatg aaattcgtca ggaacaacta cgtgaattat cttacttaaa tggctcagag
 300
 gactctgggc gtggcagagg tattagagggc agaggggatcc ggatt
 345

<210> 3804

<211> 115

<212> PRT

<213> Homo sapiens

<400> 3804

Pro	Arg	Gly	Asn	Ser	Leu	Lys	Arg	Leu	Gln	Glu	Glu	Thr	Gly	Ala	Lys
1				5				10						15	
Met	Ser	Ile	Leu	Gly	Lys	Gly	Ser	Met	Arg	Asp	Lys	Ala	Lys	Glu	Glu
			20					25					30		
Glu	Leu	Arg	Lys	Ser	Gly	Glu	Ala	Lys	Tyr	Ala	His	Leu	Ser	Asp	Glu
			35				40					45			
Leu	His	Val	Leu	Ile	Glu	Val	Phe	Ala	Pro	Pro	Gly	Glu	Ala	Tyr	Ser
	50				55					60					
Arg	Met	Ser	His	Ala	Leu	Glu	Glu	Ile	Lys	Lys	Phe	Leu	Val	Pro	Asp
65					70					75				80	
Tyr	Asn	Asp	Glu	Ile	Arg	Gln	Glu	Gln	Leu	Arg	Glu	Leu	Ser	Tyr	Leu
			85					90						95	
Asn	Gly	Ser	Glu	Asp	Ser	Gly	Arg	Gly	Arg	Gly	Ile	Arg	Gly	Arg	Gly
			100					105						110	
Ile	Arg	Ile													
			115												

<210> 3805

<211> 1923

<212> DNA

<213> Homo sapiens

<400> 3805

ataaaatttt taaaagggtgg ggggctggaa ctggcagagt ataagtggca ctgtgtgttg
 60
 ctcagctgaa ctccatgccc tgtgaacaat ataagcaaca gtccctgctat ttccactgac
 120
 aagagcccgt tgccctaccag atgccaggcc ctgtgcttcc tectgccttt gaggttttgg
 180
 cttgtgatca accaggaggg aaacatgggt actgctcgcc aggaacctcg cctggtcctg
 240
 atttcctga cctgcatgg tgacaccctg actctcagt cagcctacac aaaggaccta
 300
 ctactgccta tcaaaacgcc caccacaaat gcagtgcaca agtgcagagt gcacggcctg
 360
 gagatagagg gcagggactg tggcgaggcc gccgccaggt ggataaccag cttcctgaag
 420

tcacagccct accgcctggt gcacttcgag cctcacatgc gaccgagacg tcctcatcaa
480
atagcagact tgttccgacc caaggaccag attgcttact cagacaccag cccattcttg
540
atccttttctg aggcgtcgct ggcggtatctc aactccaggc tagagaagaa agttaaaagca
600
accaacttca ggcccaatat tgtaatttca ggatgcatg tctatgcaga ggattcttgg
660
gatgagcttc ttattggtga cgtggaactg aaaaggggtga tggcttggtc cagatgcatt
720
ttaaccacag tggaccacaga caccggtgtc atgagcagga aggaaccgct ggaaacactg
780
aagagttatc gccagtgtga cccttcagaa cgaaagtatt atggaaaatc accactcttt
840
gggcagtatt ttgtgctgga aaaccaggga accatcaaag tgggagaccc tgtgtacctg
900
ctgggccagt aatgggaacc gtatgtcctg gaatattaga tgccttttaa aaatgttctc
960
aaaaatgaca acacttgaag catggtgttt cagaactgag acctctacat tttctttaa
1020
tttgtgattt tcacattttt cgtcttttgg acttctggtg tctcaatgct tcaatgtccc
1080
agtgcacaaa gtaaagaaat atagtctcaa taacttagta ggacttcagt aagtcactta
1140
aatgacaaga caggattctg aaaactcccc gtttaactga ttatggaata gttctttctc
1200
ctgcttctcc gtttatctac caagagcgca gacttgcac cgtgcactac cactcgttag
1260
agaaagagaa gaagagaaaag aggaagagtg ggtgggctgg aagaatgtcc tagaatgtgt
1320
tattgcccct gttcatgagg tacgcaatga aaattaaatt gcaccccaaa tatggctgga
1380
atgccacttc ccttttcttc tcaagccccg ggctagcttt tgaaatggca taaagactga
1440
ggtgaccttc aggaagcact gcagatatta atttccata gatctggatc tggccctgct
1500
gcttctcaga cagcattgga tttcctaaag gtgctcagga ggatggtgt gtagtcatgg
1560
aggaccctg gatccttgcc attcccctca gctaatgacg gagtgctcct tctccagttc
1620
cgggtgaaaa agttctgaat tctgtggagg agaagaaaag tgattcagtg atttcagata
1680
gactactgaa aacctttaa gggggaaaag gaaagcatat gtcagttgtt taaaaccaa
1740
tatctatttt ttaactgatt gtataactct aagatctgat gaagtatatt ttttattgcc
1800
attttgcct ttgattatat tgggaagttg actaaacttg aaaaatgttt ttaaaactgt
1860
gaataaatgg aagctacttt gaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
1920
aaa
1923

<210> 3806

<211> 280
 <212> PRT
 <213> Homo sapiens

<400> 3806

Thr	Pro	Cys	Pro	Val	Asn	Asn	Ile	Ser	Asn	Ser	Pro	Ala	Ile	Ser	Thr
1				5					10					15	
Asp	Lys	Ser	Pro	Leu	Pro	Thr	Arg	Cys	Gln	Ala	Leu	Cys	Phe	Leu	Leu
			20					25					30		
Pro	Leu	Arg	Phe	Trp	Leu	Val	Ile	Asn	Gln	Glu	Gly	Asn	Met	Val	Thr
		35					40					45			
Ala	Arg	Gln	Glu	Pro	Arg	Leu	Val	Leu	Ile	Ser	Leu	Thr	Cys	Asp	Gly
	50					55					60				
Asp	Thr	Leu	Thr	Leu	Ser	Ala	Ala	Tyr	Thr	Lys	Asp	Leu	Leu	Leu	Pro
65					70					75					80
Ile	Lys	Thr	Pro	Thr	Thr	Asn	Ala	Val	His	Lys	Cys	Arg	Val	His	Gly
				85					90					95	
Leu	Glu	Ile	Glu	Gly	Arg	Asp	Cys	Gly	Glu	Ala	Ala	Ala	Gln	Trp	Ile
			100					105					110		
Thr	Ser	Phe	Leu	Lys	Ser	Gln	Pro	Tyr	Arg	Leu	Val	His	Phe	Glu	Pro
	115						120					125			
His	Met	Arg	Pro	Arg	Arg	Pro	His	Gln	Ile	Ala	Asp	Leu	Phe	Arg	Pro
	130					135					140				
Lys	Asp	Gln	Ile	Ala	Tyr	Ser	Asp	Thr	Ser	Pro	Phe	Leu	Ile	Leu	Ser
145					150					155					160
Glu	Ala	Ser	Leu	Ala	Asp	Leu	Asn	Ser	Arg	Leu	Glu	Lys	Lys	Val	Lys
			165						170					175	
Ala	Thr	Asn	Phe	Arg	Pro	Asn	Ile	Val	Ile	Ser	Gly	Cys	Asp	Val	Tyr
			180					185					190		
Ala	Glu	Asp	Ser	Trp	Asp	Glu	Leu	Leu	Ile	Gly	Asp	Val	Glu	Leu	Lys
	195						200					205			
Arg	Val	Met	Ala	Cys	Ser	Arg	Cys	Ile	Leu	Thr	Thr	Val	Asp	Pro	Asp
	210					215						220			
Thr	Gly	Val	Met	Ser	Arg	Lys	Glu	Pro	Leu	Glu	Thr	Leu	Lys	Ser	Tyr
225					230					235					240
Arg	Gln	Cys	Asp	Pro	Ser	Glu	Arg	Lys	Leu	Tyr	Gly	Lys	Ser	Pro	Leu
			245						250					255	
Phe	Gly	Gln	Tyr	Phe	Val	Leu	Glu	Asn	Pro	Gly	Thr	Ile	Lys	Val	Gly
		260						265					270		
Asp	Pro	Val	Tyr	Leu	Leu	Gly	Gln								
	275						280								

<210> 3807
 <211> 372
 <212> DNA
 <213> Homo sapiens

<400> 3807

nacgcgtggc ggctgagcga ggtgaacgag gacttcagct tgtgccccag atacccccgt
 60
 gcggatgatcg tgccatactt ggtggacgat gatgccctgg cgcgacagcgc ccgcttccgt
 120
 cagggagggtc gcttcccggg gctcagctac caccgggtc ccagcggcag agggagcgcg
 180

ccctccccac gctccgcccc tgggtggtcg cgtcctttct gggccttttc ttttggccc
 240
 ggtcaattcg cggcgtagcc gctgccccaa ctctgcccc attctgggtcc cgccccctctc
 300
 ccgccttttc gctgggaagg gtatcacctt tctctggccc cgccccctgac ggttccgggc
 360
 cccgcgaagc tt
 372

<210> 3808

<211> 85

<212> PRT

<213> Homo sapiens

<400> 3808

Xaa	Ala	Trp	Arg	Leu	Ser	Glu	Val	Asn	Glu	Asp	Phe	Ser	Leu	Cys	Pro
1				5					10					15	
Arg	Tyr	Pro	Arg	Ala	Val	Ile	Val	Pro	Tyr	Leu	Val	Asp	Asp	Asp	Ala
			20					25					30		
Leu	Ala	Arg	Ser	Ala	Arg	Phe	Arg	Gln	Gly	Gly	Arg	Phe	Pro	Val	Leu
			35				40					45			
Ser	Tyr	His	Pro	Ala	Pro	Ser	Gly	Arg	Gly	Ser	Ala	Pro	Ser	Pro	Arg
	50					55					60				
Ser	Ala	Pro	Gly	Trp	Leu	Arg	Pro	Phe	Trp	Ala	Phe	Ser	Phe	Trp	Pro
65					70					75					80
Gly	Gln	Phe	Ala	Ala											
					85										

<210> 3809

<211> 1221

<212> DNA

<213> Homo sapiens

<400> 3809

aaaacttttt tttttttttt tggtgttaca gattgtatat ttgcatgcct ggggggttacc
 60
 aggctgtacg catataaaca gggaggaggc aggctctgag aacctgccag ggtgcctggg
 120
 ataagctgtg actttttgcc cctgatgcca taagttggag ggtcctctgc tcaaaacata
 180
 tggtagacac ttctccttct tttcatctgg tatcatgtat catctctcag atccaataag
 240
 aaaacattcc cagctccttc cctccctccc tagtaccaag gtcctcatct cagttttcat
 300
 ggggtccatgg agggctgcct ctagtgatga gctggaatct taaggcctga aatagagcca
 360
 gactgcagca gtcccaagtc ctggagagct tcaagtaact gctcccgcgc agagccaata
 420
 aaggaattct ccaggaaggc aggcaggcct cctacaccat cccgcagggt atacaggggc
 480
 actcgcacca ggcccagcac ctccagcccg tggccttgg cgctgttgc gccggcctcc
 540
 acagccaaca gtcctcagag ctccagcgtc tggcatagaa gtgccacaac gcgtggccct
 600

gacccgacgt gggagctgcg gtagtcagtg cgctccacgc ggaaagcggc agccgcttcg
 660
 cccagctcct cgcgagctc gcggttcagc ccgtcctcta ggcttctgtc ctgctgttcc
 720
 acgaatccgc cggggaagcc caggcgtcca tcgaagcgca tctgcatcag tatggcgtag
 780
 cgcagcggga tgcggccgaa gagcatccca ggggccggcg cgtagaggag agcgtaggta
 840
 ctctgttttg ctaattctgt cttaactctt cagctcagca agactactgg gctctctttg
 900
 ggtttccctt ctctgtgcta tgcctccaga caataagcta gggcacttca tttgtttcgt
 960
 ttcttctcatg gttcactatc cagtgtgtcc tgttgtccaa tgcctgaaaa ccactgtttg
 1020
 gtacattttg tctgggttttc tagttaaggc aggaggataa atctgttgcc tgtttttcca
 1080
 tcatggccag aagcaaaatc tgtatcatgt tctagtaatt ttcacaacta tcaaagttag
 1140
 tcttactaat cttttctcaa tacctaaagt tcaaaatctc ttttgtcaat ctgttatcaa
 1200
 gtactgttat ttttcttaa g
 1221

<210> 3810

<211> 97

<212> PRT

<213> Homo sapiens

<400> 3810

Ala	Gly	Ile	Leu	Arg	Pro	Glu	Ile	Glu	Pro	Asp	Cys	Ser	Ser	Pro	Lys
1				5				10						15	
Ser	Trp	Arg	Ala	Ser	Ser	Asn	Cys	Ser	Arg	Ala	Glu	Pro	Ile	Lys	Glu
			20					25					30		
Phe	Ser	Arg	Lys	Val	Gly	Arg	Pro	Pro	Thr	Pro	Ser	Arg	Arg	Val	Tyr
		35				40					45				
Arg	Gly	Thr	Arg	Thr	Arg	Pro	Ser	Thr	Ser	Ser	Pro	Trp	Ser	Leu	Ala
	50				55					60					
Arg	Val	Ala	Pro	Ala	Ser	Thr	Ala	Asn	Ser	Ser	Ser	Ser	Ser	Asp	Ala
65				70				75						80	
Trp	His	Arg	Ser	Ala	Thr	Thr	Arg	Gly	Pro	Asp	Pro	Thr	Trp	Glu	Leu
			85					90						95	

Arg

<210> 3811

<211> 296

<212> DNA

<213> Homo sapiens

<400> 3811

ggtaccctgg agatgggagc cagggtctcg tcaactgattg tgccccccac tgcccagggtt
 60
 cctgtcctta aggctcagaa ctgtagaccc tcaggcagac ccgttctccc ctaccagagg
 120

acaccacgcc agatatctgg gcagcagggga catctgacct ggggtgcttg ctggcagcac
 180
 tgcctggaca gcagggcctc cttagggcca cctcccaacc cagctagggga gcgtcttaag
 240
 gcctgccctc cctgctgggc ttgggtggga cgctcagggga caggcccctc acgcgt
 296

<210> 3812

<211> 94

<212> PRT

<213> Homo sapiens

<400> 3812

Met	Gly	Ala	Arg	Ala	Arg	Ser	Leu	Ile	Val	Pro	Pro	Thr	Ala	Gln	Val
1				5					10					15	
Pro	Val	Leu	Lys	Ala	Gln	Asn	Cys	Arg	Pro	Ser	Gly	Arg	Pro	Val	Leu
			20					25					30		
Pro	Tyr	Gln	Arg	Thr	Pro	Arg	Gln	Ile	Ser	Gly	Gln	Gln	Gly	His	Leu
		35					40					45			
Thr	Trp	Gly	Ala	Cys	Trp	Gln	His	Cys	Leu	Asp	Ser	Arg	Ala	Ser	Leu
	50					55				60					
Gly	Pro	Pro	Pro	Asn	Pro	Ala	Arg	Glu	Arg	Leu	Lys	Ala	Cys	Pro	Pro
65				70					75					80	
Cys	Trp	Ala	Trp	Val	Gly	Arg	Ser	Gly	Thr	Gly	Pro	Ser	Arg		
				85					90						

<210> 3813

<211> 1419

<212> DNA

<213> Homo sapiens

<400> 3813

agatctaagt ggtgggcccc ctctgagatg gtgactgtga gccccgagca aaacgaccgc
 60
 acccccttggt tgatgggtgca tggttttggg ggcggcggtgg gtctctggat cctcaacatg
 120
 gactcaactga gtgcccgcgc cacactgcac accttcgatc tgcttggtt cgggcgaagc
 180
 tcaaggccag cattcccaag ggaccggag ggggctgagg atgagtttgt gacatcgata
 240
 gagacatggc gggagaccat ggggatcccc agcatgatcc tcctggggca cagtttgga
 300
 ggattcctgg ccacttctta ctcaatcaag taccctgata gagttaaaca cctcatcctg
 360
 gtggacccat ggggctttcc cctccgacca actaaccoca gtgagatccg tgcaccccca
 420
 gcctgggtca aagccgtggc atctgtccta ggacgttcca atccattggc tgttcttcga
 480
 gtagctgggc cctggggggc tggctctggtg cagcgattcc ggccggactt caaacgcaag
 540
 tttgcagact tctttgaaga tgataccata tcagagtata ttaccactg caacgcacag
 600
 aatcccagtg gtgagacagc attcaaagcc atgatggagt cctttggctg ggcccggcgc
 660

cctatgctgg agcgaattca cttgattcga aaagatgtgc ctatcactat gatctacggg
 720
 tccgacacct ggatagatac cagtacggga aaaaaggtga agatgcagcg gccggattcc
 780
 tatgtccgag acatggagat taaggggtgcc tcccaccatg tctatgctga ccagccacac
 840
 atcttcaatg ctgtgggtgga ggagatctgc gactcagttg attgagctgc tctctgaaga
 900
 ggaagaggag aaagccagag agtcactctt acctccctgt ctgcttactc acccactctg
 960
 tcctttcctc accaactaac atgtgccagc caggcagagt cttgtactgt tcccagaaca
 1020
 ggacgacagt gaaaagaaca ctcttgaccc tacactgaag gctgaaggca gaagccacaa
 1080
 gaggccttga gtgccacccc caggggaagaa cataaagggg tgcacaatgc caccatcca
 1140
 ctcccttgcca agtggttacc agatgggtgga ggatgtgaag ggattgcacc aagccacatt
 1200
 cactctctct gtggcctttc ttcctctggg caaagaaggg cttccagtgg cctttcctca
 1260
 ctctgtagtg tttgtgggga taggttccat gcaagaacac cttcctcctc catccccac
 1320
 ttcaccccat cccataccag ttccatccag ggtctgctta actgccaaga gcaggtcctg
 1380
 gagttccctt cacctgcaga gtccttttca tgacctagg
 1419

<210> 3814

<211> 294

<212> PRT

<213> Homo sapiens

<400> 3814

Arg	Ser	Lys	Trp	Trp	Ala	Pro	Ser	Glu	Met	Val	Thr	Val	Ser	Pro	Glu
1				5				10						15	
Gln	Asn	Asp	Arg	Thr	Pro	Leu	Val	Met	Val	His	Gly	Phe	Gly	Gly	Gly
			20					25					30		
Val	Gly	Leu	Trp	Ile	Leu	Asn	Met	Asp	Ser	Leu	Ser	Ala	Arg	Arg	Thr
		35					40					45			
Leu	His	Thr	Phe	Asp	Leu	Leu	Gly	Phe	Gly	Arg	Ser	Ser	Arg	Pro	Ala
	50					55				60					
Phe	Pro	Arg	Asp	Pro	Glu	Gly	Ala	Glu	Asp	Glu	Phe	Val	Thr	Ser	Ile
65					70				75						80
Glu	Thr	Trp	Arg	Glu	Thr	Met	Gly	Ile	Pro	Ser	Met	Ile	Leu	Leu	Gly
			85					90					95		
His	Ser	Leu	Gly	Gly	Phe	Leu	Ala	Thr	Ser	Tyr	Ser	Ile	Lys	Tyr	Pro
			100					105					110		
Asp	Arg	Val	Lys	His	Leu	Ile	Leu	Val	Asp	Pro	Trp	Gly	Phe	Pro	Leu
		115					120					125			
Arg	Pro	Thr	Asn	Pro	Ser	Glu	Ile	Arg	Ala	Pro	Pro	Ala	Trp	Val	Lys
		130				135						140			
Ala	Val	Ala	Ser	Val	Leu	Gly	Arg	Ser	Asn	Pro	Leu	Ala	Val	Leu	Arg
145					150				155					160	
Val	Ala	Gly	Pro	Trp	Gly	Pro	Gly	Leu	Val	Gln	Arg	Phe	Arg	Pro	Asp

				165					170					175					
Phe	Lys	Arg	Lys	Phe	Ala	Asp	Phe	Phe	Glu	Asp	Asp	Thr	Ile	Ser	Glu				
			180						185					190					
Tyr	Ile	Tyr	His	Cys	Asn	Ala	Gln	Asn	Pro	Ser	Gly	Glu	Thr	Ala	Phe				
		195					200					205							
Lys	Ala	Met	Met	Glu	Ser	Phe	Gly	Trp	Ala	Arg	Arg	Pro	Met	Leu	Glu				
	210					215					220								
Arg	Ile	His	Leu	Ile	Arg	Lys	Asp	Val	Pro	Ile	Thr	Met	Ile	Tyr	Gly				
225					230					235					240				
Ser	Asp	Thr	Trp	Ile	Asp	Thr	Ser	Thr	Gly	Lys	Lys	Val	Lys	Met	Gln				
			245						250				255						
Arg	Pro	Asp	Ser	Tyr	Val	Arg	Asp	Met	Glu	Ile	Lys	Gly	Ala	Ser	His				
		260					265						270						
His	Val	Tyr	Ala	Asp	Gln	Pro	His	Ile	Phe	Asn	Ala	Val	Val	Glu	Glu				
	275					280						285							
Ile	Cys	Asp	Ser	Val	Asp														
	290																		

<210> 3815

<211> 3669

<212> DNA

<213> Homo sapiens

<400> 3815

```

ngggagcagc tgcagccccg cccgcgcctc ccgggtccct tacgtctggc agctgcccag
60
ctcgggcccgg tctgaccggt ttgggcccgc acgcctggcg ctgtgctggg aggagccgcc
120
gccagtccgc cggtcagtgc ctccctccag actcgggagg gtcgaggggg cgcgggagag
180
agcgcggggcg gccgccgggg ctggctgcct gcagggatgg gggacgagcg gcccactac
240
tacgggaaac acggaacgcc acagaagtat gatcccaatt tcaaaggacc catttacaat
300
aggggctgca cggatatcat atgctgtgtg ttctgtctcc tggccattgt gggctacgtg
360
gctgtaggca tcatagcctg gactcatgga gaccctcgaa aggtgatcta cccactgat
420
agccggggcg agttctgcgg gcagaagggc acaaaaaacg agaacaaacc ctatctgttt
480
tatttcaaca ttgtgaaatg tgccagcccc ctggttctgc tggaattcca atgtcccact
540
cccagatct gcgtggaaaa atgccccgac cgctacctca cgtacctgaa tgctcgcagc
600
tcccgggact ttgagtacta taagcagttc tgtgttcttg gtttcaagaa caataaagga
660
gtggctgagg tgcttcgaga tggtgactgc cctgctgtcc tcatccccag caaacccttg
720
gcccgagat gcttccccgc tatccacgcc tacaagggtg tctgatggt gggcaatgag
780
acgacctatg aggatgggca tggctcccg aaaaacatca cagacctggt ggagggcgcc
840
aagaaagcca atggagtcct agaggcgcg caactcgcca tgcgcatatt tgaagattac
900

```

accgtctctt ggtactggat tatcatagga ctggtcattg ccatggcgat gagcctcctg
960
ttcatcatcc tgcttcgctt cctggctggg attatgggtc gggatgatgat catcatgggtg
1020
attctggtgc tgggctacgg aatatttcac tgctacatgg agtactcccg actgctgggt
1080
gaggccggct ctgatgtctc tttgggtggac ctgggctttc agacggattt ccgggtgtac
1140
ctgcacttac ggcagacctg gttggccttt atgatcatte tgagtatcct tgaagtcatt
1200
atcatcttgc tgctcatctt tctccggaag agaattctca tcgcgattgc actcatcaaa
1260
gaagccagca gggctgtggg atacgtcatg tgctccttgc tctaccact ggtcaccttc
1320
ttcttgctgt gcctctgcat cgcctactgg gccagcactg ctgtcttcct gtccacttcc
1380
aacgaagcgg tctataagat ctttgatgac agccctgccc cantttactg cgaaaacctg
1440
nncaaccag agaccttccc ctctccaat gagtcccgcc aatgccccaa tgcccggtgc
1500
cagttcgctt tctacggtgg tgagtcgggc taccaccggg ccctgctggg cctgcagatc
1560
ttcaatgcct tcatgttctt ctgggtggcc aacttcgtgc tggcgctggg ccaggtcacg
1620
ctggccgggg cctttgcctc ctactactgg gccctgcgca agccggacga cctgccggcc
1680
tccccgtct tctctgcctt tggccgggcg ctccaggtacc acacaggctc cctggccttt
1740
ggcgcgctca tcctggccat tgtgcagatc atccgtgtga tactcgagta cctggatcag
1800
cggctgaaag ctgcagagaa caagtttgcc aagtgcctca tgacctgtct caaatgctgc
1860
ttctgggtgcc tggagaagtt catcaaattc cttaatagga atgcctacat catgattgcc
1920
atctacggca ccaatttctg cacctcggcc aggaatgcct tcttctctgt catgagaaac
1980
atcatcagag tggctgtcct ggataaagtt actgacttcc tcttctctgt gggcaaactt
2040
ctgatcgttg gtagtgtggg gatcctggct ttcttcttct tcacccaccg tatcaggatc
2100
gtgcaggata cagcaccacc cctcaattat tactgggttc ctatactgac ggtgatcgtt
2160
ggctcctact tgattgcaca cggtttcttc agcgtctatg gcatgtgtgt ggacacgctg
2220
ttcctctgct tcttgaggga cctggagagg aatgacggct cggccgagag gccttacttc
2280
atgtcttcca ccctcaagaa actcttgaac aagaccaaca agaaggcagc ggagtcctga
2340
aggccccgtg ctccccacct ctcaaggagt ctcatgccgc aggggtgctca gtagctgggt
2400
ctgttcccc agcccttgg gctcacctga agtcctatca ctgccgtctt gcccctcccc
2460
atgagccaga tcccaccagt ttctggacgt ggagagtctg gggcatctcc ttcttatgcc
2520

aaggggcgct tggagttttc atggctgccc ctccagactg cgagaaacaa gtaaaaaccc
2580
attggggcct cttgatgtct gggatggcac gtggcccgac ctccacaagc tccctcatgc
2640
ttcctgtccc ccgcttacac gacaacgggc cagaccacgg gaaggacggt gtttgtgtct
2700
gaggagctg ctggccacag tgaacaccca cgtttattcc tgccctgctcc ggccaggact
2760
gaacccttc tccacacctg aacagttggc tcaagggcca ccagaagcat ttctttatta
2820
ttattatttt ttaacctgga catgcattaa agggctctatt agctttcttt ccgtctgtct
2880
caacagctga gatggggccg ccaaggagtg ccttcctttt gctccctcct agctgggagt
2940
gacgggtggg agtgtgtgtg cccagggtggg ggtgtctcct ggctgggaag gagggaaagg
3000
gaggagagt tttgcggggg ttggcagtgg agagcaggct ggagaggaga tggctaatag
3060
ctgtttaatg gaaacctgct gggctggagg gagttaggct gaatttcccg acttctctg
3120
ccagttattg acacagctct ctttgtaaga gaggaagaa actaaaccca cccaagggat
3180
gatttcaggg ggagaggtgg agggcagatg tcctgggcaa accgggcccc tctgcccaca
3240
cacctcactt gatccttttg ccaaacttgt caaactcagg ggaactggct tcccagttgc
3300
ccctttgcca tattccaagt cccctcaga cttcatgtct ctgctcatca gcactgtccc
3360
aggatcctgg agagggagaa cccctggccc caggggaaag aggggggggt ctcccgtttc
3420
ctgtgcctgc accagccctg cccccattgc gtctgcacac ccctgcgtgt aactgcattc
3480
caaccactaa taaagtgcct attgtacagg tccaggcctg gtgtgtttgt tgggggcagt
3540
gagccagtgg cggctggtag ggggaacccc agcttccaag gccctaggag tctctgaact
3600
agggcgattc tctcaaaggg aacgaggagg gggcaggaaa cccactggct gctggctctg
3660
cctgaattc
3669

<210> 3816

<211> 707

<212> PRT

<213> Homo sapiens

<400> 3816

Met	Gly	Asp	Glu	Arg	Pro	His	Tyr	Tyr	Gly	Lys	His	Gly	Thr	Pro	Gln
1				5					10					15	
Lys	Tyr	Asp	Pro	Thr	Phe	Lys	Gly	Pro	Ile	Tyr	Asn	Arg	Gly	Cys	Thr
			20					25					30		
Asp	Ile	Ile	Cys	Cys	Val	Phe	Leu	Leu	Leu	Ala	Ile	Val	Gly	Tyr	Val
		35					40					45			
Ala	Val	Gly	Ile	Ile	Ala	Trp	Thr	His	Gly	Asp	Pro	Arg	Lys	Val	Ile

3


```
<210> 3817
<211> 419
<212> DNA
<213> Homo sapiens
```

```
<210> 3818
<211> 139
<212> PRT
```

<213> Homo sapiens

<400> 3818

```

Arg Val Val His Asn Trp Asp Phe Glu Pro Arg Lys Val Ser Arg Cys
 1           5           10           15
Ser Met Arg Tyr Leu Ala Leu Met Val Ser Arg Pro Val Leu Arg Leu
          20           25           30
Arg Glu Ile Asn Pro Leu Leu Phe Ser Tyr Val Glu Glu Leu Val Glu
          35           40           45
Ile Arg Lys Leu Arg Gln Asp Ile Leu Leu Met Lys Pro Tyr Phe Ile
          50           55           60
Thr Cys Arg Glu Ala Met Glu Ala Arg Leu Leu Leu Gln Asp Leu Leu
65           70           75           80
Asp Val His Ala Gly Arg Leu Gly Cys Ser Leu Thr Glu Ile His Thr
          85           90           95
Leu Phe Ala Lys His Ile Lys Leu Asp Cys Glu Arg Cys Gln Ala Lys
          100          105          110
Gly Phe Val Cys Glu Leu Cys Arg Glu Gly Asp Val Leu Phe Pro Phe
          115          120          125
Asp Ser His Thr Ser Val Cys Ala Asp Cys Phe
          130          135

```

<210> 3819

<211> 1731

<212> DNA

<213> Homo sapiens

<400> 3819

```

actcctcccc ctccaggaat gttcatttgt ttggagcctt gggcatccat ctcacagggg
60
agtttgacat ctctactcc cagagcttcg ctcttatatt tcttcacaaa ctgctccatc
120
tccttcacct ctctgggaga caactcatgg cactttgaag ggtcctgggtc atgtgcaggg
180
agctgctttg ccagctgctt ctcccggtac tgtgccccct ctgagcctgc tactggggcg
240
cggaagtctg acggcgccgg gcgagtggct gttgagcggc gccgcgggag ttccgcaggt
300
ttcccgtgtt cgcagcggag ccggaggcca gctgaaccgg gccgtgggat cacggatagg
360
aggaggaggg gacccatagg acgcgttaac atggacctgg aaaacaaagt gaagaagatg
420
ggcttaggtc acgagcaagg atttgagcc ccttgtttaa aatgcaaaga aaaatgtgaa
480
ggattcgaac tgcacttctg gagaaaaata tgtcgtaact gcaagtgtgg ccaagaagag
540
catgatgtcc tcttgagcaa tgaagaggat cgaaaagtgg gaaaactttt tgaagacacc
600
aagtatacca ctctgattgc aaaactaaag tcagatggaa ttcccatgta taaacgcaat
660
gttatgatat tgacgaatcc agttgctgcc aagaagaatg tctccatcaa tacagttacc
720
tatgagtggg ctctcctgt ccagaatcaa gcattggcca ggcagtacat gcagatgcta
780

```

cccaaggaaa agcagccagt agcaggctca gagggggcac agtaccggaa gaagcagctg
 840
 gcaaagcagc tccctgcaca tgaccaggac ccttcaaagt gccatgagtt gtctcccaga
 900
 gaggtgaagg agatggagca gtttgtgaag aaatataaga gcgaagctct gggagtagga
 960
 gatgtcaaac ttccctgtga gatggatgcc caaggcccca aacaaatgaa cattcctgga
 1020
 ggggatagaa gcaccccagc agcagtgggg gccatggagg acaaatctgc tgagcacaaa
 1080
 agaactcaat attcctgcta ttgctgcaaa ctgagtatga aagaaggatga cccagccatc
 1140
 tatgccgaaa gggctggcta tgataaactg tggcaccag cttgttttgt ctgcagcacc
 1200
 tgccatgaac tcctggttga catgatttat ttttggaga atgagaagct atactgtggc
 1260
 agacattact gtgacagcga gaaacccga tgtgctggct gtgacgagct gatattcagc
 1320
 aatgagtata cccaggcaga aaaccagaat tggcacctga aacacttctg ctgctttgac
 1380
 tgtgatagca ttctagctgg ggagatatac gtgatgggtca atgacaagcc cgtgtgcaag
 1440
 cctgctatg tgaagaatca cgctgtgggtg agaagtgttc taaggatatg gttgcctcag
 1500
 cctgcttttag gacttgagtt tatgcttttc ttaaagcctc ttacaaatgg gaaacagaaa
 1560
 gcagtccctc taagtagaaa gcaaattatt cctaccacag ggtgttaaaa tcaaggcaat
 1620
 tcaaaaacaa tacatgcatt gactatgagc cacctcaaga tttctacttg tgaaatttac
 1680
 aatatcaatt ataggtactg cttaataata aaatcctcac ttaaaaaaaaa a
 1731

<210> 3820

<211> 535

<212> PRT

<213> Homo sapiens

<400> 3820

Thr	Pro	Pro	Pro	Pro	Gly	Met	Phe	Ile	Cys	Leu	Glu	Pro	Trp	Ala	Ser
1				5					10					15	
Ile	Ser	Gln	Gly	Ser	Leu	Thr	Ser	Pro	Thr	Pro	Arg	Ala	Ser	Leu	Leu
			20					25					30		
Tyr	Phe	Phe	Thr	Asn	Cys	Ser	Ile	Ser	Phe	Thr	Ser	Leu	Gly	Asp	Asn
		35					40					45			
Ser	Trp	His	Phe	Glu	Gly	Ser	Trp	Ser	Cys	Ala	Gly	Ser	Cys	Phe	Ala
	50					55					60				
Ser	Cys	Phe	Phe	Arg	Tyr	Cys	Ala	Pro	Ser	Glu	Pro	Ala	Thr	Gly	Arg
65				70						75				80	
Arg	Lys	Phe	Asp	Gly	Ala	Gly	Arg	Val	Ala	Val	Glu	Arg	Arg	Arg	Gly
				85				90						95	
Ser	Ser	Ala	Gly	Phe	Pro	Cys	Ser	Gln	Arg	Ser	Arg	Arg	Pro	Ala	Glu
			100					105					110		
Pro	Gly	Arg	Gly	Ile	Thr	Asp	Arg	Arg	Arg	Arg	Gly	Pro	Ile	Gly	Arg

115	120	125
Val Asn Met Asp Leu Glu Asn Lys Val Lys Lys Met Gly Leu Gly His		
130	135	140
Glu Gln Gly Phe Gly Ala Pro Cys Leu Lys Cys Lys Glu Lys Cys Glu		
145	150	155
Gly Phe Glu Leu His Phe Trp Arg Lys Ile Cys Arg Asn Cys Lys Cys		
165	170	175
Gly Gln Glu Glu His Asp Val Leu Leu Ser Asn Glu Glu Asp Arg Lys		
180	185	190
Val Gly Lys Leu Phe Glu Asp Thr Lys Tyr Thr Thr Leu Ile Ala Lys		
195	200	205
Leu Lys Ser Asp Gly Ile Pro Met Tyr Lys Arg Asn Val Met Ile Leu		
210	215	220
Thr Asn Pro Val Ala Ala Lys Lys Asn Val Ser Ile Asn Thr Val Thr		
225	230	235
Tyr Glu Trp Ala Pro Pro Val Gln Asn Gln Ala Leu Ala Arg Gln Tyr		
245	250	255
Met Gln Met Leu Pro Lys Glu Lys Gln Pro Val Ala Gly Ser Glu Gly		
260	265	270
Ala Gln Tyr Arg Lys Lys Gln Leu Ala Lys Gln Leu Pro Ala His Asp		
275	280	285
Gln Asp Pro Ser Lys Cys His Glu Leu Ser Pro Arg Glu Val Lys Glu		
290	295	300
Met Glu Gln Phe Val Lys Lys Tyr Lys Ser Glu Ala Leu Gly Val Gly		
305	310	315
Asp Val Lys Leu Pro Cys Glu Met Asp Ala Gln Gly Pro Lys Gln Met		
325	330	335
Asn Ile Pro Gly Asp Arg Ser Thr Pro Ala Ala Val Gly Ala Met		
340	345	350
Glu Asp Lys Ser Ala Glu His Lys Arg Thr Gln Tyr Ser Cys Tyr Cys		
355	360	365
Cys Lys Leu Ser Met Lys Glu Gly Asp Pro Ala Ile Tyr Ala Glu Arg		
370	375	380
Ala Gly Tyr Asp Lys Leu Trp His Pro Ala Cys Phe Val Cys Ser Thr		
385	390	395
Cys His Glu Leu Leu Val Asp Met Ile Tyr Phe Trp Lys Asn Glu Lys		
405	410	415
Leu Tyr Cys Gly Arg His Tyr Cys Asp Ser Glu Lys Pro Arg Cys Ala		
420	425	430
Gly Cys Asp Glu Leu Ile Phe Ser Asn Glu Tyr Thr Gln Ala Glu Asn		
435	440	445
Gln Asn Trp His Leu Lys His Phe Cys Cys Phe Asp Cys Asp Ser Ile		
450	455	460
Leu Ala Gly Glu Ile Tyr Val Met Val Asn Asp Lys Pro Val Cys Lys		
465	470	475
Pro Cys Tyr Val Lys Asn His Ala Val Val Arg Ser Val Leu Arg Ile		
485	490	495
Trp Leu Pro Gln Pro Ala Leu Gly Leu Glu Phe Met Leu Phe Leu Lys		
500	505	510
Pro Leu Thr Asn Gly Lys Gln Lys Ala Val Leu Leu Ser Arg Lys Gln		
515	520	525
Ile Ile Pro Thr Thr Gly Cys		
530	535	

<210> 3821
<211> 5212
<212> DNA
<213> Homo sapiens

<400> 3821
nnggtataact ttgttttgct ttgtttcaca atttggttta ataagagtga tttcatttac
60
ctcaagtgct atttcctcat aatgctgtgt aatgctaaag ctttgattat gtgcgtgtgt
120
ggtttttttc tccaatagga aattatttcc agtcagagaa ggaaaccagt gcctggcatt
180
ctcaccatct ttctacctac catgatcaag tgcttgctcag ttgaagtaca agccaaattg
240
cgttctgggt tggccataag ctccctgggc caatgtgttg aggaacttgc cctcaacagt
300
attgatgctg aagcaaaatg tgtggctgtc aggggtgaata tggaaacctt ccaagttcaa
360
gtgatagaca atggatttgg gatggggagt gatgatgtag agaaagtggg aaatcgttat
420
ttcaccagta aatgccactc ggtacaggac ttggagaatc caaggtttta tggtttccga
480
ggagaggcct tggcaaatat tgctgacatg gccagtgtct tggaaatttc gtccaagaaa
540
aacaggacaa tgaaaacttt tgtgaaactg tttcagagtg gaaaagccct gaaagcttgt
600
gaagctgatg tgactagagc aagcgtctgg actactgtaa cagtgtataa cctattttac
660
cagcttcctg taaggaggaa atgcatggac cctagactgg agtttgagaa ggttaggcag
720
agaatagaag ctctctcact catgcacct tccatttctt tctctttgag aaatgatgtt
780
tctggttcca tggttcttca gctccctaaa accaaagacg tatgttcccg attttgtcaa
840
atztatggat tgggaaagtc ccaaaagcta agagaaataa gttttaataa taaagagttt
900
gagcttagtg gctatatcag ctctgaagca cattacaaca agaatatgca gtttttggtt
960
gtgaacaaaa gactagtttt aaggacaaag ctacataaac tcattgactt tttattaagg
1020
aaagaaagta ttatatgcaa gccaaagaat ggtcccacca gtaggcaa at gaattcaagt
1080
cttcggcacc ggtctacccc agaactctat ggcatatatg taattaatgt gcagtgccaa
1140
ttctgtgagt atgatgtgtg catggagcca gccaaaactc tgattgaatt tcagaactgg
1200
gacactctct tgttttgcac tcaggaagga gtgaaaatgt ttttaaagca agaaaaatta
1260
tttggtggaat tatcaggtga ggatattaag gaatttagtg aagataatgg ttttagttta
1320
tttgatgcta ctcttcagaa gcgtgtgact tccgatgaga ggagcaattt ccaggaagca
1380
tgtaataata ttttagattc ctatgagatg ttttaatttgc agtcaaaagc tgtgaaaaga
1440

aaaactactg cagaaaacgt aaacacacag agttctaggg attcagaagc taccagaaaa
1500
aatacaaatg atgcattttt gtacatttat gaatcagggtg gtccaggcca tagcaaaatg
1560
acagagccat ctttacaaaa caaagacagc tcttgctcag aatcaaagat gttagaacaa
1620
gagacaattg tagcatcaga agctggagaa aatgagaaac ataaaaaatc tttcctggaa
1680
catagctctt tagaaaatcc gtgtggaacc agtttagaaa tgtttttaag cccttttcag
1740
acaccatgtc actttgagga gagtgggcag gatctagaaa tatggaaaga aagtactact
1800
gttaatggca tggctgcca catcttgaaa aataatagaa ttcagaatca accaaagaga
1860
tttaaagatg ctactgaagt gggatgccag cctctgcctt ttgcaacaac attatgggga
1920
gtacatagtg ctcagacaga gaaagagaaa aaaaaagaat ctagcaattg tggaagaaga
1980
aatgttttta gttatgggcg agttaaatga tggtccactg gctttataac tcatgtagta
2040
caaaatgaaa aaactaaatc aactgaaaca gaacattcat ttaaaaatta tgtagacct
2100
ggccccacac gtgccaaga aacatttgga aatagaacac gtcattcagt tgaaactcca
2160
gacatcaaag atttagccag cactttaagt aaagaatctg gtcaattgcc caacaaaaaa
2220
aattgcagaa cgaatataag ttatgggcta gagaatgaac ctacagcaac ttatacaatg
2280
ttttctgctt ttcaggaagg tagcaaaaaa tcacaaacag attgcatatt atctgataca
2340
tccccctctt tccccctgga tagacacgtt tccaatgata gtaggaaaac agataaatta
2400
attggtttct ccaaaccaat cgtccgtaag aagctaagct tgagttcaca gctaggatct
2460
ttagagaagt ttaagaggca atatgggaag gttgaaaatc ctctggatac agaagtagag
2520
gaaagtaatg gagtcactac caatctcagt cttcaagttg aacctgacat tctgctgaag
2580
gacaagaacc gcttagagaa ctctgatgtt tgtaaaatca ctactatgga gcatagtgat
2640
tcagatagta gttgtcaacc agcaagccac atccttgact cagagaagtt tccattctcc
2700
aaggatgaag attgttttaga acaacagatg cctagtttga gagaaagtcc tatgaccctg
2760
aaggagttat ctctctttaa tagaaaacct ttggacctg agaagtcac tgaatcacta
2820
gcctctaaat tatccagact gaagggttcc gaaagagaaa ctcaaacaat ggggatgatg
2880
agtcgtttta atgaacttcc aaattcagat tccagtagga aagacagcaa gttgtgcagt
2940
gtgttaacac aagatttttg tatgttattt aacaacaagc atgaaaaaac agagaatggt
3000
gtcatcccaa catcagattc tgccacacag gataattcct ttaataaaaa tagtaaaaca
3060

cattctaaca gcaataacaac agagaactgt gtgatatcag aaactccttt ggtattgccc
3120
tataataatt ctaaagttac cggtaaagat tcagatgttc ttatcagagc ctcagaacaa
3180
cagataggaa gtcttgactc tcccagtggg atgttaatga atccggtaga agatgccaca
3240
ggtgaccaa atggaatttg ttttcagagt gaggaatcta aagcaagagc ttgttctgaa
3300
actgaagagt caaacacgtg ttgttcagat tggcagcggc atttcgatgt agccctggga
3360
agaatggttt atgtcaacaa aatgactgga ctcagcacat tcattgcccc aactgaggac
3420
attcaggctg cttgtactaa agacctgaca actgtggctg tggatgttgt acttgagaat
3480
gggtctcagt acagggtgtc accttttaga agcgacctg ttcttccttt ccttccgaga
3540
gctcgagcag agaggactgt gatgagacag gataacagag atactgtgga tgatactgtt
3600
agtagcgaat cgcttcagtc tttgttctca gaatgggaca atccagtatt tgcccgttat
3660
ccagagggtg ctggtgatgt aagcagtggc caggctgaga gcttagcagt taaaattcac
3720
aacatcttgt atccctatcg tttcaccaa ggaatgattc attcaatgca ggttctccag
3780
caagtagata acaagtttat tgctgtttg atgagcacta agactgaaga gaatggcgag
3840
gcagattcct acgagaagca acaggcaca ggctctggtc ggaaaaaatt actgtcttct
3900
actctaattc ctccgctaga gataacagtg acagaggaac aaaggagact cttatggtgt
3960
taccacaaaa atctggaaga tctgggcctt gaatttgtat ttccagacac tagtgattct
4020
ctggctcttg tgggaaaagt accactatgt tttgtggaaa gagaagccaa tgaacttcgg
4080
agaggaagat ctactgtgac caagagtatt gtggaggaat ttatccgaga acaactggag
4140
ctactccaga ccaccggagg catccaaggg acattgccac tgactgtcca gaagggtgtg
4200
gcatcccaag cctgccatgg ggccattaag tttaatgatg gcctgagctt acaggaaagt
4260
tgccgcctta ttgaagctct gtcctcatgc cagctgccat tccagtgtgc tcacgggaga
4320
ccttctatgc tgccgttagc tgacatagac cacttggaa acaggaaaaa gattaaaccc
4380
aacctcacta aacttcgcaa aatggcccag gcctggcgtc tctttggaaa agcagagtgt
4440
gatacaaggg agagcctgca gcagtccatg cctccctgtg agccaccatg agaacagaat
4500
cactggtcta aaaggaacaa agggatgttc actgtatgcc tctgagcaga gagcagcagc
4560
agcaggtacc agcacggccc tgactgaatc agcccagtgt ccctgagcag cttagacagc
4620
agggctctct gtatcagtct ttcttgagca gatgattccc ctagttgagt agccagatga
4680

aattcaagcc taaagacaat tcattcattt gcatccatgg gcacagaagg ttgctatata
4740
gtatctacct ttgctactt atttaatgat aaaatttaat gacagtttga aaaaaaaaaa
4800
aaaaaaaaatt atttgaaggg gtgggtgatt ttgttttttg tacagttttt tttcaagctt
4860
cacatttgcg tgtatctaatt tcagctgatg ctcaagtcca aggggtagtc tgccttccca
4920
ggctgcccc agggtttctg cactgggtccc ctcttttccc ttcagtcttc ttcacttccc
4980
tatgctgctg cttcatgtgc tacatctcag acttaaagag tttctctact acagtgaaaa
5040
cattctctag ggtctttcat caggccttta gttatttttag ggataaaaaac tattgataaa
5100
aaggacaagg atagaacaga gaaaatttaa agtcctgttc cgggtttttt gttatgtttt
5160
ctttaaaaaac tcagagactg atgttcaata tcccaaacca gtaaaatggt ga
5212

<210> 3822

<211> 375

<212> PRT

<213> Homo sapiens

<400> 3822

Met	Val	Tyr	Val	Asn	Lys	Met	Thr	Gly	Leu	Ser	Thr	Phe	Ile	Ala	Pro
1				5					10					15	
Thr	Glu	Asp	Ile	Gln	Ala	Ala	Cys	Thr	Lys	Asp	Leu	Thr	Thr	Val	Ala
			20					25					30		
Val	Asp	Val	Val	Leu	Glu	Asn	Gly	Ser	Gln	Tyr	Arg	Cys	Gln	Pro	Phe
	35					40					45				
Arg	Ser	Asp	Leu	Val	Leu	Pro	Phe	Leu	Pro	Arg	Ala	Arg	Ala	Glu	Arg
	50					55					60				
Thr	Val	Met	Arg	Gln	Asp	Asn	Arg	Asp	Thr	Val	Asp	Asp	Thr	Val	Ser
65					70					75				80	
Ser	Glu	Ser	Leu	Gln	Ser	Leu	Phe	Ser	Glu	Trp	Asp	Asn	Pro	Val	Phe
			85					90					95		
Ala	Arg	Tyr	Pro	Glu	Val	Ala	Val	Asp	Val	Ser	Ser	Gly	Gln	Ala	Glu
			100					105					110		
Ser	Leu	Ala	Val	Lys	Ile	His	Asn	Ile	Leu	Tyr	Pro	Tyr	Arg	Phe	Thr
	115						120					125			
Lys	Gly	Met	Ile	His	Ser	Met	Gln	Val	Leu	Gln	Gln	Val	Asp	Asn	Lys
	130					135						140			
Phe	Ile	Ala	Cys	Leu	Met	Ser	Thr	Lys	Thr	Glu	Glu	Asn	Gly	Glu	Ala
145					150					155				160	
Asp	Ser	Tyr	Glu	Lys	Gln	Gln	Ala	Gln	Gly	Ser	Gly	Arg	Lys	Lys	Leu
			165					170					175		
Leu	Ser	Ser	Thr	Leu	Ile	Pro	Pro	Leu	Glu	Ile	Thr	Val	Thr	Glu	Glu
			180					185					190		
Gln	Arg	Arg	Leu	Leu	Trp	Cys	Tyr	His	Lys	Asn	Leu	Glu	Asp	Leu	Gly
			195				200					205			
Leu	Glu	Phe	Val	Phe	Pro	Asp	Thr	Ser	Asp	Ser	Leu	Val	Leu	Val	Gly
	210					215					220				
Lys	Val	Pro	Leu	Cys	Phe	Val	Glu	Arg	Glu	Ala	Asn	Glu	Leu	Arg	Arg


```

225          230          235          240
Gly Arg Ser Thr Val Thr Lys Ser Ile Val Glu Glu Phe Ile Arg Glu
          245          250          255
Gln Leu Glu Leu Leu Gln Thr Thr Gly Gly Ile Gln Gly Thr Leu Pro
          260          265          270
Leu Thr Val Gln Lys Val Leu Ala Ser Gln Ala Cys His Gly Ala Ile
          275          280          285
Lys Phe Asn Asp Gly Leu Ser Leu Gln Glu Ser Cys Arg Leu Ile Glu
          290          295          300
Ala Leu Ser Ser Cys Gln Leu Pro Phe Gln Cys Ala His Gly Arg Pro
305          310          315          320
Ser Met Leu Pro Leu Ala Asp Ile Asp His Leu Glu Gln Glu Lys Gln
          325          330          335
Ile Lys Pro Asn Leu Thr Lys Leu Arg Lys Met Ala Gln Ala Trp Arg
          340          345          350
Leu Phe Gly Lys Ala Glu Cys Asp Thr Arg Gln Ser Leu Gln Gln Ser
          355          360          365
Met Pro Pro Cys Glu Pro Pro
          370          375

```

<210> 3823

<211> 6280

<212> DNA

<213> Homo sapiens

<400> 3823

```

nngggtgccc actgcctcct cgtccccctc cccccaagca acaacaacaa caacaactcc
60
aagcacaccg gccataagag tgcgtgtgtc cccaacatga ccgaacgaag aagggacgag
120
ctctctgaag agatcaacaa cttaagagag aagggtcatga agcagtcgga ggagaacaac
180
aacctgcaga gccagggtgca gaagctcaca gaggagaaca ccacccttcg agagcaagtg
240
gaaccacccc ctgaggatga ggatgatgac atcgagctcc gcggtgctgc agcagctgct
300
gccccacccc ctccaataga ggaagagtgc ccagaagacc tcccagagaa gttcgatggc
360
aaccagaca tgetggctcc tttcatggcc cagtgccaga tttcatgga aaagagcacc
420
agggatttct cagttgatcg tgcccggtc tgcttcgtga caagcatgat gaccggccgt
480
gctgccggtt gggcctcagc aaagctggag cgctcccact acctgatgca caactaccca
540
gctttcatga tggaaatgaa gcatgtcttt gaagaccctc agaggcgaga ggttgccaaa
600
cgcaagatca gacgcctgcg ccaaggcatg gggctctgtc tgcactactc caatgctttc
660
cagatgattg cccaggacct ggattggaac gagcctgcgc tgattgacca gtaccacgag
720
ggcctcagcg accacattca ggaggagctc tcccacctcg aggtcgccaa gtcgctgtct
780
gctctgattg ggcagtgcac tcacattgag agaaggctgg ccagggctgc tgcagctcgc
840

```

aagccacgct cgccacccccg ggcgctgggtg ttgcctcaca ttgcaagcca ccaccaggta
900
gatccaaccg agccgggtggg aggtgcccgc atgcgcctga cgcaggaaga aaaagaaaga
960
cgcagaaagc tgaacctgtg cctctactgt ggaacaggag gtcactacgc tgacaattgt
1020
cctgccaaagg cctcaaagtc ttcgcccggc ggaaactccc cggccccgct gtagaggagac
1080
cttcagcgac cgggccagaa ataataaggt cccacaaga tgatgcctca tctccacact
1140
tgcaagtgat gctccagatt catcttccgg gcagacacac cctgttcgtc cgagccatga
1200
tcgattctgg tgcctctggc aacttcattg atcacgaata tgttgctcaa aatggaattc
1260
ctctaagaat caaggactgg ccaatacttg tggaagcaat tgatgggccc cccatagcat
1320
cgggcccagt tgtccacgaa actcacgacc tgatagttga cctgggagat caccgagagg
1380
tgctgtcatt tgatgtgact cagtctccat tcttccctgt cgtcctaggg gtctcgtggc
1440
tgagcacaca tgatcccaat atcacatgga gcactcgatc tatcgtcttt gattctgaat
1500
actgccgcta ccaactgccg atgtattctc caataccacc atcgtccca ccaccagcac
1560
cacaaccgcc actctattat ccagtagatg gatacagagt ttaccaacca gtgagggtatt
1620
actatgtcca gaatgtgtac actccagtag atgagcacgt ctaccagat caccgcctgg
1680
ttgaccctca catagaaatg atacctggag cacacagtat tcccagtggg catgtgtatt
1740
cactgtccga acctgaaatg gcagctcttc gagattttgt ggcaagaaat gtaaaagatg
1800
ggctaattac tccaacgatt gcacctaatg gagcccaagt tctccagggt aagaggggggt
1860
ggaaactgca agtttcttat gattgccgag ctccaaacaa ttttactatc cagaatcagt
1920
atcctcgctt atctattcca aatttagaag accaagcaca cctggcaacg tacactgaat
1980
tcgtacctca aatacctgga taccaaacat accccacata tgccgcgtac ccgacctacc
2040
cagtaggatt cgctggtac ccagtgggac gagacggaca aggaagatca ctatatgtac
2100
ctgtgatgat cacttggaat ccacactggt accgccagcc tccggtacca cagtaccgcg
2160
cgccacagcc gccgcctcca ccaccaccac cgccgccgcc tccatcttac agtaccctgt
2220
aaatacctgt catgtccttc aggatctctg ccctcaaaat ttattcctgt tcagcttctc
2280
aatcagtgc tgtgtgctaa attttaggct actgtatctt caggccacct gaggcacatc
2340
ctctctgaaa cggctatgga aggttagggc cactctggac tggcacacat cctaaagcac
2400
caaaagacct tcaacatttt ctgagagcaa cagagtattt gccataaat gatctctcat
2460

ttttccacct tgactgccaa tctaactaaa ataattaata agtttacttt ccagccagtc
2520
ctggaagtct gggttttacc tgccaaaacc tccatcacca tctaaattat aggctgccaa
2580
atttgctggt taacatttac agagaagctg atacaaacgc aggaaatgct gatttcttta
2640
tggaggggga gacgaggagg aggaggacat gacttttctt gcggtttcgg taccctcttt
2700
ttaaatacact ggaggactga ggccttatta aggaatccaa aattatcggt gcagtgtgga
2760
aaggcttccg tgatcctctc gctgcacct tagaaacttc accgtcttca aactccattt
2820
ccatggttct gttaattctc aaggagcagc aactcgactg gttctcccag gagcaggaaa
2880
aacccttggtg acatgaaaca tctcaggcct gaaaagaaag tgctctctca gatggactct
2940
tgcattgtaa gactatgtct tcacatcatg gtgcaaatca catgtacca atgactccgg
3000
ctttgacaca acaccttacc atcatcatgc catgatggct tccacaaagc attaaacctg
3060
gtaaccagag attactgggtg gctccagcgt tgtagatgt tcatgaaatg tgaccacctc
3120
tcaatcacct ttgagggcta aagagtagca catcaaaagg actccaaaat cccataccca
3180
actcttaaga gatttgtcct ggtacttcag aaagaatttt catgagtgtt cttaatgggc
3240
tggaaaagca ccagctgacg ttttggaaga atctatccat gtgtctgcct ccatatgcat
3300
ctgggcattt catcttcagt cccctcatta gactgtagca ttaggatgtg tggagagagg
3360
agaaatgatt tagcaccag attcacactc ctatgcctgg aagggggaca tctttgaaga
3420
agaggaatta gggctgtgga cactgtcttg aggatgtgga cttccttagt gagctccaca
3480
ttacttgatg gtaaccactt caaaaggatc agaatccacg taatgaaaaa ggtccctcta
3540
gaggatggag ctgatgtgaa gctgccaatg gatgaaaagc ctcagaaagc aactcaaagg
3600
actcaaagca acggacaaca caagagtgtt cttcagccca gtgacacctc tgatgtcccc
3660
tggaagcttt gtgctaacct gggactgcct gacttccttt agcctgggtc cttgtacta
3720
ccttgaactg ttttatctaa cctctctttt tctgtttaat tctttgctac tgccattgac
3780
cctgtgcag gatttgtgtc attttcctgc ctggttgctg agactccatt ttgctgccac
3840
acacagagat gtaagaggca ggctttaatt gccaaagcac agtttgagca gtagaaaaca
3900
acatgggtga tatctcaaata tgctgacat gaagaggagt ctaacgggtga agtttcactt
3960
ttcatcagca tcatctttca catgttcatt atcatccgct cttattcttg catgtttaaa
4020
cacttaaaat ttttagtata atttttagtg tgttttgaag tggtgactag gctttcaaaa
4080

acttccattg aattacaaag cactatccag ttcttattgt taaactaagt aaaaatgata
4140
agtaacatag tgtaaaatat tcctttactg tgaacttctt acaatgctgt gaatgagagg
4200
ctcctcagaa ctggagcatt tgtataataa ttcacccctgt tcatcttcaa ttttaacatc
4260
atatataatt tcaattctat caattggggc tttaaaaatc atataaaagg atataaaatt
4320
tgaaaagaga aacctaattg gctattttaat ccaaaacaac tttttttttc cttcaatgga
4380
atcggaagc ttgtcaatca ctcatgtgtt ttagagtaat tactttttaa atggtgcatt
4440
tgtgcttctg aactattttg aagagtcact tctgtttacc tcaagtatca attcatcctc
4500
catacatttg aattcaagtt gtttttttgt caaatttaca gttgtcaatt gatcttcaag
4560
ctgcaggggtg cctagaaatg ggccgttgtc tgtagccctg gcatgtgcac acggacattt
4620
gccaccactg caagcaaaag tctggagaag ttcaccaacg acaagaacga ttagggaaaa
4680
tatgctgctg tgggttaaca actcagaaag tccctgatcc acatttggct gtttactaaa
4740
gcttgtgatt aacttttttg cagtgtgtac tatgctctat tgctatatat gctatctata
4800
aatgtagatg ttaaggataa gtaattctaa atttattatt ctatagtttt gaagtttggt
4860
taagtttcct ttactcaat tgatttattt tgttggttaat caaatttatg ttaattggat
4920
cctttaaatt ttttttgga ttttccaaca aaaatggctt tattcataag aaaggaaaaa
4980
aatcaatgga atttgatatc taaagaagtt agaaagggag caaaataaaa aacataaagg
5040
agatagatga attagtaagc aaatcagtag tcgagttttt caaactggca aaattaatta
5100
attgactttt agcccaaatt tacattgtta attaaatcaa gaaggaagaa gatctaagag
5160
ctcccattga taggcaagcc tagagagaac tagctaaatt tatcatgcta ggatattgaa
5220
acacagaaag tttacatata tttatgaagg gtcaatttag tttggacagt gaggtatttg
5280
tcttagtgga aaaaaggaga attagtctga tcaaatcgtg aagtaatata gtgaacttgc
5340
agggtgcacaa aataagaggg ccacatctat atggtgcagt ctggaattct gtttaagttt
5400
gtaggtacct cttggacttc tgaattgatc cagttgtcat ccaccacaga catctcacat
5460
cagatacaga cagttccaag attgacaaca gagaacaacc tgctggaaag acctgggagc
5520
aaatggagag ccctgcggga accatgctac attttcatct aaagagagaa tgcacatctg
5580
atgagactga aagttctttg ttgttttaga ttgtagaatg gtattgaatt ggtctgtgga
5640
aaattgcatt gcttttattt ctttgtgtaa tcaagtttaa gtaatagggg atataatac
5700

ataagcattt taggggtggga gggactatta agtaatttta agtgggtggg gttatttaga
 5760
 atgttagaat aatattatgt attagatata gctataagt gacatgcgta cttacttgta
 5820
 accctttacc ctataattgc tacccttaaa gatttcaaat aaactcggag ggaactgcag
 5880
 ggagaccaac ttatttagag cgaattggac atggataaaa accccagtgg gagaaagttc
 5940
 aaaggtgatt agattaataa ttaatagag gatgagtgac ctctgataaa ttactgctag
 6000
 aatgaacttg tcaatgatgg atggtaaatt ttcattggaag ttataaaaagt gataaataaa
 6060
 aacccttgct tttacccttg tcagtagccc tctctctacc actgaacccc attgccctta
 6120
 cccctccttc taactttatt gctgtattct ctctactcta tatttctctc tatttgctaa
 6180
 tattgcattg ctgttacaat aaaaattcaa taaagattta gtgggtaagt gcaaaaaaaaa
 6240
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 6280

<210> 3824

<211> 342

<212> PRT

<213> Homo sapiens

<400> 3824

Asn	Asn	Asn	Asn	Ser	Lys	His	Thr	Gly	His	Lys	Ser	Ala	Cys	Val	Pro
1				5					10					15	
Asn	Met	Thr	Glu	Arg	Arg	Arg	Asp	Glu	Leu	Ser	Glu	Glu	Ile	Asn	Asn
			20					25					30		
Leu	Arg	Glu	Lys	Val	Met	Lys	Gln	Ser	Glu	Glu	Asn	Asn	Asn	Leu	Gln
		35					40					45			
Ser	Gln	Val	Gln	Lys	Leu	Thr	Glu	Glu	Asn	Thr	Thr	Leu	Arg	Glu	Gln
		50				55					60				
Val	Glu	Pro	Thr	Pro	Glu	Asp	Glu	Asp	Asp	Asp	Ile	Glu	Leu	Arg	Gly
65					70				75						80
Ala	Ala	Ala	Ala	Ala	Ala	Pro	Pro	Pro	Pro	Ile	Glu	Glu	Glu	Cys	Pro
				85				90						95	
Glu	Asp	Leu	Pro	Glu	Lys	Phe	Asp	Gly	Asn	Pro	Asp	Met	Leu	Ala	Pro
		100						105					110		
Phe	Met	Ala	Gln	Cys	Gln	Ile	Phe	Met	Glu	Lys	Ser	Thr	Arg	Asp	Phe
		115					120					125			
Ser	Val	Asp	Arg	Val	Arg	Val	Cys	Phe	Val	Thr	Ser	Met	Met	Thr	Gly
		130				135					140				
Arg	Ala	Ala	Arg	Trp	Ala	Ser	Ala	Lys	Leu	Glu	Arg	Ser	His	Tyr	Leu
145				150						155					160
Met	His	Asn	Tyr	Pro	Ala	Phe	Met	Met	Glu	Met	Lys	His	Val	Phe	Glu
			165						170					175	
Asp	Pro	Gln	Arg	Arg	Glu	Val	Ala	Lys	Arg	Lys	Ile	Arg	Arg	Leu	Arg
		180					185					190			
Gln	Gly	Met	Gly	Ser	Val	Ile	Asp	Tyr	Ser	Asn	Ala	Phe	Gln	Met	Ile
		195					200					205			
Ala	Gln	Asp	Leu	Asp	Trp	Asn	Glu	Pro	Ala	Leu	Ile	Asp	Gln	Tyr	His

210		215		220
Glu Gly Leu Ser Asp His Ile Gln Glu Glu Leu Ser His Leu Glu Val				
225		230		235
Ala Lys Ser Leu Ser Ala Leu Ile Gly Gln Cys Ile His Ile Glu Arg				240
	245		250	255
Arg Leu Ala Arg Ala Ala Ala Ala Arg Lys Pro Arg Ser Pro Pro Arg				
	260		265	270
Ala Leu Val Leu Pro His Ile Ala Ser His His Gln Val Asp Pro Thr				
	275		280	285
Glu Pro Val Gly Gly Ala Arg Met Arg Leu Thr Gln Glu Glu Lys Glu				
	290		295	300
Arg Arg Arg Lys Leu Asn Leu Cys Leu Tyr Cys Gly Thr Gly Gly His				
305		310		315
Tyr Ala Asp Asn Cys Pro Ala Lys Ala Ser Lys Ser Ser Pro Ala Gly				320
	325		330	335
Asn Ser Pro Ala Pro Leu				
	340			

<210> 3825

<211> 2051

<212> DNA

<213> Homo sapiens

<400> 3825

```

nggacacctc acaggtgcgc ctccgaggag agggagggcg ccctgcgtcc ggcagaggag
60
gcgagcatcc cgctcaggtg atgaggaacc cctcgcgcac ccagcgcaga aggctgctgc
120
cgccggacgc ctccattggt tgaccacaac aaggggccgga ttctcaccca ggatcctaag
180
gcctttgtag tccttcagcc actgtgggccc ctgcctctgc ctgttcttct ggaatgtctt
240
gggggttttg atcctgtcac tgtgacctgc aaatccaaga gacacatctt tggaagataa
300
gagagcttct tcaagaccaa aaaaggagac ggcatgatac ccatgtaggg aattccccaa
360
agcaggggctt gccatacctg gacccccgagg agcctgcttg ctggaaaggc tttcctgtct
420
gatgtgcagg aggcagaatg ccaaactgac tcttcaagg gcaactgcag gggctcgaga
480
ccagccagca gtatctcatc cttcgatata ggggatatac tgtacagtcc tttttctaga
540
agtgaacat acaagattac tctacaanga ggaagattcc aggggctcaa aaacgcaaag
600
gtttgcactt tgagagcccc ttggaatggt gacaactcag gatctaaaac aaagttctgt
660
gttaatgagt tacagaattc acgtggaagt caatgtcact ttataatcga taataatact
720
gagtgaggaa cactatgcag gaagaaacct tccgtagaaa gacaggcagg gnnaaaagct
780
taggctgacc ttaaacttac ctaatagagc aagcctgaga tagactgcca aaatggccaa
840
ataagagact ctatgaaata acagtcttgt aactgtagta atcataagga aattttctcc
900

```

ttgaaatcac gataccaaat aggaaaaatg atctacaagt gcccacatgtg tagggaattt
 960
 ttctctgaga gatgccgagg tggtcagtat cctgactttc agaggccttt ttttgtttgt
 1020
 tttaattttt actagattga tattaaaaac tcatgtggag gaactcaagg aatgtttaga
 1080
 agaccaaag tccccaatga caggaacaaa agcaaccaat ttttaacttt ctcttctcat
 1140
 tcctgttttc attgatttcc cacatgtagt ctttttgtc aggaagtctt tggggaaatt
 1200
 aaggatcttt gaagctctga aataggtgat caggttagtgt gtgtctgtca gctgtctaag
 1260
 aggttggaag atgaactact caagatagtc acgaaaatac tgaaagtgtg atttttcttt
 1320
 ccatatttga attaattttt tctgtttgac tggaaggggt ttttgtataa ctaaacctc
 1380
 agcgcataaa ggagatttaa aaggagcaca tgatttagtg ggtgggcat gaaactagag
 1440
 atgggatttg ggggtgaatt tgtcaatatac tggattttta tccagacatc tctgctaaca
 1500
 agcctttggt aagtcacttc agatactttt cctccttttt acaaagagag ggctggctta
 1560
 gttatttgcc aaagcccctt ccaggcctga attccacaag tacaatttac tgtagtgtct
 1620
 tatcactctt tcatgtcaca atagcgtgga gcattagaga aaagcctaga cttttagttg
 1680
 atagccagtt gaaatatcat tgatagaatt ttagtttttag gaaaaattgg tttgatttct
 1740
 agctttatta ctattaggta tgtgagcttg ggcaaategc ttaatctttg agtctagttt
 1800
 tctctcaaaa tgagaacatt aggctaaatg atttccgagt ttccagctag tcctagagtt
 1860
 ctatatttct acatagttga attattttat catgctgttg ctggggaata tgactaaccc
 1920
 ttttgaagct actaatttta tgcgagctt taaagtccat aattgttatc ttcagaaaaa
 1980
 attatttgac ctacagtatg tccaaatcaa ttaataaaaa tcgctttata acaggaaaaa
 2040
 aaaaaaaaaa a
 2051

<210> 3826

<211> 125

<212> PRT

<213> Homo sapiens

<400> 3826

Gly	Ile	Pro	Gln	Ser	Arg	Ala	Cys	His	Thr	Trp	Thr	Pro	Arg	Ser	Leu
1				5					10					15	
Leu	Ala	Gly	Lys	Ala	Phe	Leu	Ser	Asp	Val	Gln	Glu	Ala	Glu	Cys	Gln
			20					25					30		
Thr	Asp	Ser	Ser	Arg	Gly	Asn	Cys	Arg	Gly	Ser	Arg	Pro	Ala	Ser	Ser
		35					40					45			
Ile	Ser	Ser	Phe	Asp	Thr	Gly	Asp	Ile	Leu	Tyr	Ser	Pro	Phe	Ser	Arg

50		55		60
Ser Glu Thr Tyr Lys Ile Thr Leu Gln Xaa Gly Arg Phe Gln Gly Leu				
65		70		75
Lys Asn Ala Lys Val Cys Thr Leu Arg Ala Pro Trp Asn Val Asp Asn				80
	85		90	95
Ser Gly Ser Lys Thr Lys Phe Cys Val Asn Glu Leu Gln Asn Ser Arg				
	100		105	110
Gly Ser Gln Cys His Phe Ile Ile Asp Asn Asn Thr Glu				
	115		120	125

<210> 3827

<211> 1245

<212> DNA

<213> Homo sapiens

<400> 3827

nacgcgtgcc ggagcagcaa acccaggcca gcctgaaaag tcacctctgg cgctcagcgt
 60
 ctctggagag cgtggagtgt caactgttga tgactgggtt tatattgagg agccccgagc
 120
 gtgcagaaca agagtcccaa gtcagatgaa gaggccgaga gcactaaaga agctcagaat
 180
 gaattatttg aagcacaagg acagctgcag acctgggatt ctgaggactt tgggagcccc
 240
 cagaagtcct gcagcccctc ctttgacacc ccagagagcc agatccgggg cgtgtgggaa
 300
 gagctggggg tgggcagcag cggacacctg agcgagcagg agctggctgt ggtctgccag
 360
 agcgtcgggc tccagggact cgagaaagag gaactcgaag acctgtttaa caaactggat
 420
 caagacggag acggcaaagt gagtcttgag gaattccagc ttggcctctt cagtcatgag
 480
 cccgcgtac ttctagagtc ttccactcgg gttaaaccga gcaaggcttg gtctcattac
 540
 caggtccag aggagagcgg ctgccacacc accacaacct catccctcgt gtccctgtgc
 600
 tccagcctgc gcctcttctc cagcattgac gatgggtctg gcttcgcttt tcctgatcag
 660
 gtccctggcca tgtggaccca ggaggggatt cagaatggca gggagatctt gcagagcctg
 720
 gacttcagcg tggacgagaa ggtgaacctt ctggagctga cctgggcccct tgacaacgag
 780
 ctcatgacag tggacagtgc cgtccagcag gcagccctgg cctgctacca ccaggagctg
 840
 agtaccagc aagggcaggt ggagcagctg gcaagggagc gtgacaaggc aaggcaggac
 900
 ctggagaggg ccgagaagag gaacctggag tttgtgaaag agatggacga ctgccactcc
 960
 accctggagc agctcacgga gaagaaaatc aagcatctgg agcaggggta ccgggaaagg
 1020
 ctgagcctcc tgcggtctga ggtggaggcg gagcgagagc tgttctggga gcaggccac
 1080
 aggagaggg ccgcgctgga gtgggacgtg gggcgctgc aggctgagga ggctggcctc
 1140

cgcgagaagc tgaccctggc cctgaaggaa aacagtcgcc tacagaagga gattgtggaa
 1200
 atgggtggaaa agctttcgga ttcggagagg ctggccctga agctg
 1245

<210> 3828

<211> 379

<212> PRT

<213> Homo sapiens

<400> 3828

Gly	Ala	Pro	Ser	Val	Gln	Asn	Lys	Ser	Pro	Lys	Ser	Asp	Glu	Glu	Ala
1				5					10				15		
Glu	Ser	Thr	Lys	Glu	Ala	Gln	Asn	Glu	Leu	Phe	Glu	Ala	Gln	Gly	Gln
			20					25					30		
Leu	Gln	Thr	Trp	Asp	Ser	Glu	Asp	Phe	Gly	Ser	Pro	Gln	Lys	Ser	Cys
		35					40					45			
Ser	Pro	Ser	Phe	Asp	Thr	Pro	Glu	Ser	Gln	Ile	Arg	Gly	Val	Trp	Glu
	50					55					60				
Glu	Leu	Gly	Val	Gly	Ser	Gly	His	Leu	Ser	Glu	Gln	Glu	Leu	Ala	
65				70				75						80	
Val	Val	Cys	Gln	Ser	Val	Gly	Leu	Gln	Gly	Leu	Glu	Lys	Glu	Glu	Leu
			85					90					95		
Glu	Asp	Leu	Phe	Asn	Lys	Leu	Asp	Gln	Asp	Gly	Asp	Gly	Lys	Val	Ser
			100					105					110		
Leu	Glu	Glu	Phe	Gln	Leu	Gly	Leu	Phe	Ser	His	Glu	Pro	Ala	Leu	Leu
		115				120						125			
Leu	Glu	Ser	Ser	Thr	Arg	Val	Lys	Pro	Ser	Lys	Ala	Trp	Ser	His	Tyr
	130					135					140				
Gln	Val	Pro	Glu	Glu	Ser	Gly	Cys	His	Thr	Thr	Thr	Thr	Ser	Ser	Leu
145					150					155					160
Val	Ser	Leu	Cys	Ser	Ser	Leu	Arg	Leu	Phe	Ser	Ser	Ile	Asp	Asp	Gly
			165						170				175		
Ser	Gly	Phe	Ala	Phe	Pro	Asp	Gln	Val	Leu	Ala	Met	Trp	Thr	Gln	Glu
			180					185					190		
Gly	Ile	Gln	Asn	Gly	Arg	Glu	Ile	Leu	Gln	Ser	Leu	Asp	Phe	Ser	Val
		195				200						205			
Asp	Glu	Lys	Val	Asn	Leu	Leu	Glu	Leu	Thr	Trp	Ala	Leu	Asp	Asn	Glu
	210					215					220				
Leu	Met	Thr	Val	Asp	Ser	Ala	Val	Gln	Gln	Ala	Ala	Leu	Ala	Cys	Tyr
225					230					235					240
His	Gln	Glu	Leu	Ser	Tyr	Gln	Gln	Gly	Gln	Val	Glu	Gln	Leu	Ala	Arg
			245						250				255		
Glu	Arg	Asp	Lys	Ala	Arg	Gln	Asp	Leu	Glu	Arg	Ala	Glu	Lys	Arg	Asn
			260					265					270		
Leu	Glu	Phe	Val	Lys	Glu	Met	Asp	Asp	Cys	His	Ser	Thr	Leu	Glu	Gln
		275					280						285		
Leu	Thr	Glu	Lys	Lys	Ile	Lys	His	Leu	Glu	Gln	Gly	Tyr	Arg	Glu	Arg
	290					295					300				
Leu	Ser	Leu	Leu	Arg	Ser	Glu	Val	Glu	Ala	Glu	Arg	Glu	Leu	Phe	Trp
305					310					315					320
Glu	Gln	Ala	His	Arg	Gln	Arg	Ala	Ala	Leu	Glu	Trp	Asp	Val	Gly	Arg
			325					330						335	
Leu	Gln	Ala	Glu	Glu	Ala	Gly	Leu	Arg	Glu	Lys	Leu	Thr	Leu	Ala	Leu

	340		345		350										
Lys	Glu	Asn	Ser	Arg	Leu	Gln	Lys	Glu	Ile	Val	Glu	Met	Val	Glu	Lys
	355				360						365				
Leu	Ser	Asp	Ser	Glu	Arg	Leu	Ala	Leu	Lys	Leu					
	370					375									

<210> 3829

<211> 5713<212> DNA

<213> Homo sapiens

<400> 3829

```

naccggtgac tgtatcccgt ggtttctcac ttaggactct ttttatcccc acccagaaca
60
caggagtcct gacctgcgtt ctgaagcatt tggaatacaa cggtcacatt taagaccctg
120
gaggaggagc tatttgggaa caatgaggag agcccagctt ttaaggagtt cttggacctg
180
ctggggggaca cgatcacact gcaggatttc aaaggtttcc gaggaggcct ggacgtgacc
240
cacggacaga caggggtgga atcagtgtac acaacattcc gggacagggg gatcatgttt
300
cacgtttcca caaagctgcc atttaccgac ggagacgccc agcagctcca gagaaagaga
360
cacattggaa atgacatcgt ggccatcatc ttccaagagg aaaacacgcc gtttgtccca
420
gacatgatag cctccaattt cttacatgcc tacatcgtcg tgcaggtcga gaccccaggc
480
acagagaccc catcctacaa ggtctctgtc actgcgcggg aagatgtgcc cacctttggt
540
ccacctctgc ccagtcccc cgttttccag aaggggcccg aattcaggga gtttctgctc
600
accaagctca ccaatgccga gaacgcctgc tgcaagtcgg acaagtttgc aaagctggag
660
gaccggacca gggctgccct cctggacaac cttcacgatg agctccacgc ccacacacag
720
gccatgctgg gactgggccc agaggaggac aagtttgaga atggaggcca cgggggggttc
780
ctggagtctt ttaagagggc catccgcgta cgcagccact ccatggagac catggtgggc
840
ggccagaaga agtcgcacag tgggggcata cctggcagcc tcagcggggg catctccac
900
aacagcatgg aggtcaccaa gaccaccttc tcgcctccag tggcggcggc aacggtgaag
960
aaccagtcac ggagtcccat caagcgacgc tcggggctct tccccgcct gcacacgggc
1020
tcagaaggcc agggcgacag ccgggcacga tgtgacagca catccagcac acccaagacc
1080
ccagatggtg gacactcctc tcaggagata aagtctgaga cctcatccaa tcccagctct
1140
ccagaaatct gcccacaaca ggagaagccc ttcataaagt tgaaggaaaa cggccgcgcc
1200
atctcccgt cctcctccag caccagcagc gtcagcagca ctgcagggga gggcgaggcc
1260

```

atggaggagg gcgacagtgg gggcagccag ccgtccacga cctcaccctt caagcaggag
1320
gtgtttgtct acagcccgtc cccgagcagc gagagcccca gcctggggggc agctgccacc
1380
ccgatcatca tgagccggag tcccacagat gccaaaagca gaaactcccc gagatcgaac
1440
ctgaaattcc gctttgacaa gctcagccat gccagctctg gtgcgggtca ctaatgtgaa
1500
agtggagtcc ttcgcctgtc caaggggaatc ccctcttctg tcctggaaaa ggctcctgac
1560
ctcccagtgt gatgtccggg tcctttatca tcctattcat cctggagagg aaaagtgtcg
1620
ggcaaagggg gatctggggg gagctcagca gtgactgggg agctgggtctg cctcagagac
1680
agagtagggg gtgggagcag agcctcgggt aggggtcttg ccacagggca gtgccttctc
1740
gaacgtggca ggctttacta ccaggaacgc actcgggtgg ggaggcccca tgttcccagg
1800
agccaagatt cgtagcatcc ttgaggccat cctgataaaa ttcggcgcta tggccccgt
1860
agctctggag ctctaaaccg tctatctgct tctgtgctga acgcctttcc catctgctga
1920
cgtaggcca gggctgccct gccctgctg ccagtgtacc gtgagcgggg ctccagccag
1980
ttcaagctca gagccagagc tggacgggcc agaactgcgc tgcacacttc ctggactgag
2040
gcggggactt tgggtcccac ccggtttctc ctgattatgg ctgctgtggg gtgaggggag
2100
ggaggggcag ccccgaggca gtctcttccc tttgagaaga tattttccca caaaggggtg
2160
ggaagccagg agtgagaagg aattcagga gagcaaagga gccagtgtct agatgtgtct
2220
gtgttggttg aggaaaacct cgggcctgag ggccaggccg gagcccagg ctctgtgtgac
2280
aatgggggtt caggggaagac gtcgttatct cccctccca cttactcgag gagagagggtg
2340
agggggggat gaettgcggg ttctgatcag gccctgggt ggggaagggg cacagtgtcc
2400
ctcagcagct tacgcccctg gagtcttggg gggcccagcc tggccctggg gccttttcca
2460
gctactgtgc ccttgggcag ctgcgtctgg ggctcaacc cccaatcctg ttcccctctc
2520
cagctgcggg tctgtaggca gctgtcacat ctgaagggtt tctgcaacct ggaccccatc
2580
tgggtgtggg tcagaccctg tgaccacat gccacccca cctccacag agcccccttg
2640
ctgggacagc cagctcacct ccaaggacat cccctcctgg cttctcccc ttccgagtct
2700
gcagcgccgt gggcttctct gccgatgggc ccgggttggg gttaagggtg gcatcctcca
2760
ggtacaacga gcctgaagag cccctttcag tgcagacggg gctgcagagt gacactggct
2820
gggcacctgc cccacgacca atgacaagga tttccagctg aatgctttat tcccataggg
2880

atctggacct gtgcccaaga tataaatact acactttttt tttttttttt tttttaactg
2940
acattgtgaa attctcccta tagcttttgc cattcaagca acattgtgat ctttcttccc
3000
cgccacgtgt gtgggaatga ttgagtcttg tttgcaagct ggagaggagc tctccctttg
3060
ctagtacttt ctctaaagta ctagtctagt aaaatttatt cttgttagaa ggtcaacaaa
3120
atatctgttt agcttttatg aagagtcacc gtagcagccc ccacggctgg aaagaggcct
3180
gtacgtttctg gacgcgtttt gttggctggg cttctggagg cactggcaag gtcaaactgc
3240
atttctttaa gaacagttgc aggatctggc ttgcctctgt gggaagccgg cattacaggt
3300
gcttgggtgga tgggccgtgt cacattgcca tctgggggtcc tttggggttt ccaggttgtc
3360
accatgctgt cccatttggg aatcccatac ctgcctgtcc ccactgcgct ggctgaccct
3420
tgctgcctgc tgcctcttgg gagggtcttg tccctgcctc tgagctgggtg ggcaggatgg
3480
ctgggtggcc cccagagaag cacagacctg ggatggggtc tccatgcccg gtttgcgtgt
3540
ggaatgatct gaacaggacc ccaaatgcct cttccctctg gtcatgcctc actatctcta
3600
ggagctccat cctgtggctt ccagagtgtg cacttccagc ccaccgggc agtgctgaga
3660
gggaggagga gaacaaggat ggcccagcct cccctccctc ccctagacca cggggcgggc
3720
agctcgggtt cctggagggc tgtttccccc acgctgtccc tacatctgct ctgatctaaa
3780
atgtctttcc ttttatgctg cggccagtct tggggctcaa agatttgccc aaacctcatt
3840
ggcctctgtg actaggtcca tctagatggg gtcacgctg gtgtttgagg catttccact
3900
gtgatctcca cgaggggatg ttttccggga cacatctctg gctctgggaa ctgcctgact
3960
cactgaagaa actacttttc aggcactgta gggtcaccca tatgcctcca gctcagttga
4020
cgcttaaaaa caggtgcaga aaagctcgcg atggaaggte ttaatgagag tgtctgtcta
4080
tgccagtcac gtaaaatgac gtttcttgaa aaagattcag tggttcagct ttgtcagcat
4140
catctcaaca caagcctgct ggctcttttt agcatctcat ccaaccatgt catcgtccag
4200
atgagaaatc ttagcccagg tgaggggagt aacttgcttg aggtcacaca gctggctgtt
4260
ggcaaagctg ggattagaac cctcaaccca gggtccttct ctctgcagcg cctacatggg
4320
tggttgaata agtggctgcg tttcctgggg ccctgggttt tggggaagcc agttagctgc
4380
tgctttggca ctggcatgga ggtgagcagt caaggatgct ggtgaggccg cagtttctgc
4440
tctttttcat caggggggat agtctctagg atttttcagt gaggaccctt gggctttgga
4500

tgcagcttga accaagaaaa cgaggagggg aagggattca gtgaactatt cctcagtggg
4560
atcggttctt cagctcctga tgggggctgt gtaatggggg cagaggccag ggaaaaagat
4620
gctgttcacc caccctcagc ttcccttttc ctaaattaag aggaaaagtg gtcaaagaaa
4680
aactcttcat ttctccctga ttcttaagcg aaggtgggta atagaaactc aggctcccgt
4740
gacaaggcag gacaagagcc tgtttcgctt tcctccctga ccctgccagg tgccaactca
4800
aacactacct ttctcattgg tttctaagtc agtagagaca gatctgtttt aagcagttgg
4860
gggttcgagt agatctcatg ggtacaggag gccagcaggg accaggccag tcagccatgc
4920
tcaggacccc tcggctcctc cccagcctc tagctaccct gtatcgaggc aaggggaggg
4980
cagtaaagtt tgccaagcct gatcctgcag cctgggtgggg ctgggtgggg tattctttta
5040
ccaaactctg ttttaccgcc agccccttgt acaccccaat cccatgtctc cctcccttca
5100
gctggaccgt gtgccccctt gggaggaaga agacaagccc cactagggcc aagggcagca
5160
gagccctgcc gagtgagagg ctgtggggca gcggctctgt cctgtgcctt accagccctg
5220
gggagggggg catttggtg gaagactgga atttaattgc catcgtcttt gattttgtga
5280
catttctgct tggaagtgtg aactaccctc cccccccgc ttctgctcc ttagcatgcg
5340
tgcagctctc tcctgttttg ggtgttcccc ttggacactc cagctcgggg actgctggcg
5400
tgtgagtgtg cagattcccc tgtgtggctg aacctaaaga ctgtggcttg gaagtgatgc
5460
tccatgtgac gacgactttg ctttctttcc tcttagtgag gaggtgattc gtagatccca
5520
actgcctatg taatgtaaat aatgtacatt taatttattg ctatggtagc acattgtatt
5580
tgttaatgta caaaacaaat tctaaaagg tgcacaaatgt atattttgtt gcttaaatgt
5640
gtctttgcag aaattgacaa taaataacat attttgtgtc aaaaaaaaaa aaaaaaaaaa
5700
aaaaaaaaaaa aaa
5713

<210> 3830

<211> 444

<212> PRT

<213> Homo sapiens

<400> 3830

Phe	Lys	Glu	Phe	Leu	Asp	Leu	Leu	Gly	Asp	Thr	Ile	Thr	Leu	Gln	Asp
1				5				10					15		
Phe	Lys	Gly	Phe	Arg	Gly	Gly	Leu	Asp	Val	Thr	His	Gly	Gln	Thr	Gly
			20				25					30			
Val	Glu	Ser	Val	Tyr	Thr	Thr	Phe	Arg	Asp	Arg	Glu	Ile	Met	Phe	His

```
<210> 3831
<211> 726
```

<212> DNA

<213> Homo sapiens

<400> 3831

```

aaatttggtg cagaagtttc ttgccttggtg ttttaaggct gaggagtgga aaacattctg
60
tgtgaacaat taagagagac ttgtggcaga agtagatttc tttggcattt gcacacagga
120
gtcagaaaca aatgatgtcc atagcatttg gctgggctaa cgtctaaagt cgtagctttt
180
agacgagtat gagttctcac tctgtgttac ctgctgagtc cctgagggca tgtgagttca
240
gtcctgaaac agaccactg nccgtgtcac agatcccagc ttcgctaagc tcagcttttag
300
catgttatgg tttatcgttt ctccagctcc attccacaaa ctctcatata gatagaatta
360
atttcagtgt aaaaatggtg tcattctattc ttcagatacc taagttgtca tatctggggc
420
tgggagacat taaaaatatg gagcaaaaat actgcaacct gtgtatccaa cttttcatct
480
cttttcttct ccttacagtc cagacctttt agccctccca ttcattcttc cagccctcct
540
ccaatagcac ccttagcgcg ggctgaaagc acttcttcaa tatcggaac caattccttg
600
agcgcagcca ccactccac agttgagaat gaacagcctt ccctcgtttg ggttgacaga
660
ggaaaggttt atttgacttt tgaagggttct tccaggggac ccagccccct aaccatggga
720
gctcag
726

```

<210> 3832

<211> 107

<212> PRT

<213> Homo sapiens

<400> 3832

```

Met Ser Ser His Ser Val Leu Pro Ala Glu Ser Leu Arg Ala Cys Glu
 1          5          10          15
Phe Ser Pro Glu Thr Asp Pro Leu Xaa Val Ser Gln Ile Pro Ala Ser
          20          25          30
Leu Ser Ser Ala Leu Ala Cys Tyr Gly Leu Ser Phe Leu Gln Leu His
          35          40          45
Ser Thr Asn Ser His Ile Asp Arg Ile Asn Phe Ser Val Lys Met Val
          50          55          60
Ser Ser Ile Leu Gln Ile Pro Lys Leu Ser Tyr Leu Gly Leu Gly Asp
65          70          75          80
Ile Lys Asn Met Glu Gln Lys Tyr Cys Asn Leu Cys Ile Gln Leu Phe
          85          90          95
Ile Ser Phe Leu Leu Thr Val Gln Thr Phe
          100          105

```

<210> 3833

<211> 1764

<212> DNA

<213> Homo sapiens

<400> 3833

gctagcggca ggcgcgggaa gccactggc gaggcggctt ctccggctcc tgcgagcgcc
60
ggcggcgggg ccagctcgca gccgcggaag aagctggtat ccgtctgcga ccaactgcaag
120
ggcaagatgc agctggtggc tgacctgctg ctgctgtcga gcgaggcgcg gcccggtgctc
180
ttcgaaggcc ccgcctcctc tggtgccggc gccgagtcct tcgagcaggg ccgggacacc
240
atcatcgcg gcaccaagg gctctccatc ctcaccacg acgtgcagag ccagctcaac
300
atggggccgt tcggggaggc gggggacagc ctgggtggagc tgggcgacct ggtggtgtcg
360
ctgaccgagt gctcggccca cgcggcctat ctggccgctg tggccacgcc gggcgccag
420
cccgcgcagc cgggcctggt ggaccgctac cgcgtgacgc gatgccgcca cgagggtggag
480
cagggttgcg ccgtgctgcg cgccacgccg ctggccgaca tgacgccgca gctgctgctg
540
gaggtgtcgc agggcctgtc gcgcaacctc aagtctctga cggacgcgtg cgccctggcc
600
agtgacaagt cacgggaccg cttttcgcgg gagcagttca agctgggcgt caagtgcattg
660
agcaccagcg cgtcggcgct gctggcctgc gtgcgcgagg tgaagggtggc gccagtgag
720
ctggcgcgca gccgctgtgc gctcttcagc gggcccctgg tcgaggcagt gagcgccctg
780
gtaggcttcg ccaccgagcc gcagttcctg ggtcgcgcgg cagctgtgag cgccgagggc
840
aaggcgggtg agaccgccat cctgggcggc gccatgagcg tgggtgtcggc ctgcgtgctc
900
ctgaccagct gcctcaggga tctggcgagc caccgccagc ggggcgccaa gatgtcggac
960
cacagggaga ggctgaggaa ctcggcctgc gccgtgtctg aaggctgcac cctgctatct
1020
caggctttaa gggagaggtc ttcgcccagg actttaccgc cagtgaattc caattctgtg
1080
aattagcacc ccacccccat accccttctt ccacccccag actaaaggaa gatacttact
1140
ctctgcccct ctccatttat accaaagaaa tcataggtga aacccccctac cctccccaac
1200
gttaaattgct cgagaggaat cttccacaag gcagggccat gcacgcaacc tgcacacgca
1260
cttgaggggc ccagggtgtc ctccaccagc ccccatgcag tagggactgg aagatatgtc
1320
atctgctggt tgtgttatca ctcccacccc ctaccccagc ccgtcttccg gaattttctc
1380
actaaatttc attattgggc aggaaggagg tcatgggttc atttcatttt tgttttttgt
1440
gtttttaatt aaaagaaagg ttacctcagt tttcactcct tagacatgga tgtagctacc
1500

tttttttgta tgtctttttt ttttttaagc aatcgtgttg aattaggagt atacttggtg
 1560
 tggaagagt atgaatttgc catgtgattt gcaaattgggg ggaagctact gtgagcgtgt
 1620
 gtttttttaa tttacactat agagtgtatt ttttttcccc caacgtcaag tttttacctt
 1680
 gcatgtactg gagtatttat ttcattctatt aaaatgttat gttttctcaaa aaaaaaaaaa
 1740
 aaaaaaagtt ttgccctgtc gacc
 1764

<210> 3834

<211> 361

<212> PRT

<213> Homo sapiens

<400> 3834

Ala	Ser	Gly	Ser	Ala	Gly	Lys	Pro	Thr	Gly	Glu	Ala	Ala	Ser	Pro	Ala
1				5					10					15	
Pro	Ala	Ser	Ala	Gly	Gly	Gly	Ala	Ser	Ser	Gln	Pro	Arg	Lys	Lys	Leu
			20					25					30		
Val	Ser	Val	Cys	Asp	His	Cys	Lys	Gly	Lys	Met	Gln	Leu	Val	Ala	Asp
		35					40					45			
Leu	Leu	Leu	Leu	Ser	Ser	Glu	Ala	Arg	Pro	Val	Leu	Phe	Glu	Gly	Pro
	50					55					60				
Ala	Ser	Ser	Gly	Ala	Gly	Ala	Glu	Ser	Phe	Glu	Gln	Gly	Arg	Asp	Thr
65					70					75				80	
Ile	Ile	Ala	Arg	Thr	Lys	Gly	Leu	Ser	Ile	Leu	Thr	His	Asp	Val	Gln
				85					90					95	
Ser	Gln	Leu	Asn	Met	Gly	Arg	Phe	Gly	Glu	Ala	Gly	Asp	Ser	Leu	Val
			100					105					110		
Glu	Leu	Gly	Asp	Leu	Val	Val	Ser	Leu	Thr	Glu	Cys	Ser	Ala	His	Ala
		115					120					125			
Ala	Tyr	Leu	Ala	Ala	Val	Ala	Thr	Pro	Gly	Ala	Gln	Pro	Ala	Gln	Pro
	130					135					140				
Gly	Leu	Val	Asp	Arg	Tyr	Arg	Val	Thr	Arg	Cys	Arg	His	Glu	Val	Glu
145					150					155				160	
Gln	Gly	Cys	Ala	Val	Leu	Arg	Ala	Thr	Pro	Leu	Ala	Asp	Met	Thr	Pro
			165						170					175	
Gln	Leu	Leu	Leu	Glu	Val	Ser	Gln	Gly	Leu	Ser	Arg	Asn	Leu	Lys	Phe
		180					185						190		
Leu	Thr	Asp	Ala	Cys	Ala	Leu	Ala	Ser	Asp	Lys	Ser	Arg	Asp	Arg	Phe
		195					200					205			
Ser	Arg	Glu	Gln	Phe	Lys	Leu	Gly	Val	Lys	Cys	Met	Ser	Thr	Ser	Ala
	210					215					220				
Ser	Ala	Leu	Leu	Ala	Cys	Val	Arg	Glu	Val	Lys	Val	Ala	Pro	Ser	Glu
225					230					235				240	
Leu	Ala	Arg	Ser	Arg	Cys	Ala	Leu	Phe	Ser	Gly	Pro	Leu	Val	Gln	Ala
			245						250					255	
Val	Ser	Ala	Leu	Val	Gly	Phe	Ala	Thr	Glu	Pro	Gln	Phe	Leu	Gly	Arg
		260						265					270		
Ala	Ala	Ala	Val	Ser	Ala	Glu	Gly	Lys	Ala	Val	Gln	Thr	Ala	Ile	Leu
		275					280					285			
Gly	Gly	Ala	Met	Ser	Val	Val	Ser	Ala	Cys	Val	Leu	Leu	Thr	Gln	Cys

290		295		300
Leu Arg Asp Leu Ala Gln His Pro Asp Gly Gly Ala Lys Met Ser Asp				
305		310		315
His Arg Glu Arg Leu Arg Asn Ser Ala Cys Ala Val Ser Glu Gly Cys				320
	325		330	335
Thr Leu Leu Ser Gln Ala Leu Arg Glu Arg Ser Ser Pro Arg Thr Leu				
	340		345	350
Pro Pro Val Asn Ser Asn Ser Val Asn				
	355		360	

<210> 3835

<211> 2366

<212> DNA

<213> Homo sapiens

<400> 3835

nacgcgttcg atatccgccc ggagctccgg cgcagctcct ccaccttgga gctcatgaga
 60
 gcaggcctgg tggtagcag ggacggtgca ccggacggcg ggatcgagca aatgggtctg
 120
 gccatggagc acggagggtc ctacgctcgg gcgggggggca gctctcgggg ctgctggtat
 180
 tacctgcgct acttcttctc cttegtctcc ctcatccaat tcctcatcat cctggggctc
 240
 gtgctcttca tggcttatgg caacgtgcac gtgagcacag agtccaacct gcaggccacc
 300
 gagcgccgag ccgagggcct atacagtcag ctccatagggc tcacggcctc ccagtccaac
 360
 ttgaccaagg agctcaactt caccacccgc gccaaaggatg ccatcatgca gatgtggctg
 420
 aatgctcgcc gcgacctgga ccgcatcaat gccagcttcc gccagtgcc aaggtagccg
 480
 gtcattctaca cgaacaatca gaggtacatg gctgccatca tcttgagtga gaagcaatgc
 540
 agagatcaat tcaaggacat gaacaagagc tgcgatgcct tgctcttcat gctgaatcag
 600
 aaggtgaaga cgctggaggt ggagatagcc aaggagaaga ccatttgcac taaggataag
 660
 gaaagcgtgc tgctgaacaa acgcgtggcg gaggaacagc tggttgaatg cgtgaaaacc
 720
 cgggagctgc agcaccaaga gcgccagctg gccaaaggagc aactgcaaaa ggtgcaagcc
 780
 ctctgcctgc ccctggacaa ggacaagttt gagatggacc ttcgtaacct gtggagggac
 840
 tccattatcc caccgagcct ggacaacctg gggtacaacc tctaccatcc cctgggctcg
 900
 gaattggcct ccatccgcag agcctgcgac cacatgcccc gcctcatgag ctccaagggt
 960
 gaggagctgg cccggagcct cggggcgat atcgaacgag tggcccgga gaactcagac
 1020
 ctccaacgcc agaagctgga agcccagcag ggcctgcggg ccagtcagga ggcgaaacag
 1080
 aaggtggaga aggaggctca ggcccgggag gccaaagctcc aagctgaatg ctcccggcag
 1140

acccagctag cgctggagga gaaggcgggtg ctgcggaagg aacgagacaa cctggccaag
 1200
 gagctggaag agaagaagag ggaggcggag cagctcagga tggagctggc catcagaaac
 1260
 tcagccctgg acacctgcat caagaccaag tgcagccga tgatgccagt gtcaaggccc
 1320
 atggggccctg tccccaaccc ccagcccatc gaccagcta gcctggagga gttcaagagg
 1380
 aagatccctg agtcccagag gcccctgca ggcacccctg tagcccatc cagtggctga
 1440
 ggaggctcca ggcctgagga ccaagggatg gcccgactcg gcggtttgcg gaggatgcag
 1500
 ggatatgctc acagcgcccg acacaacccc ctcccgccgc cccaaccac ccagggccac
 1560
 catcagacaa ctccctgcat gcaaaccctt agtaccctct cacaccgca ccgcgcctc
 1620
 acgatccctc acccagagca caggccgcg gagatgacgt caccaagca acggcgctga
 1680
 cgtcacatat caccgtggtg atggcgctac gtggccatgt agacgtcacg aagagatata
 1740
 gcgatggcgt cgtgcagatg cagcacgtcg cacacagaca tggggaactt ggcacacgt
 1800
 cacaccgaga tgcagcaacg acgtcacggg ccatgtcgac gtcacacata ttaatgtcac
 1860
 acagacgcgg cgatggcatc acacagacgg tgatgatgtc acacacagac acagtgacaa
 1920
 cacacacat gacaacgaca cctatagata tggcaccaac atcacatgca cgcatgccct
 1980
 ttcacacaca ctttctaccc aattctcacc tagtgtcacg ttccccgac cctggcacac
 2040
 gggccaaggt acccacagga tcccatcccc tcccgcacag ccctgggccc cagcacctcc
 2100
 cctcctccag cttcctggcc tcccagccac ttcctcacc ccagtgcctg gaccggagg
 2160
 tgagaacagg aagccattca cctccgctcc ttgagcgtga gtgtttccag gacccctcg
 2220
 gggccctgag ccgggggtga gggtcacctg ttgtcgggag gggagccact ccttctcccc
 2280
 caactcccag ccctgcctgt ggcccgttga aatgttggtg gcacttaata aatattagta
 2340
 aatccttaaa aaaaaaaaaa aaaaaa
 2366

<210> 3836

<211> 479

<212> PRT

<213> Homo sapiens

<400> 3836

Xaa	Ala	Phe	Asp	Ile	Arg	Pro	Glu	Leu	Arg	Arg	Ser	Ser	Ser	Thr	Leu
1				5				10						15	
Glu	Leu	Met	Arg	Ala	Gly	Leu	Val	Val	Ser	Arg	Asp	Gly	Ala	Pro	Asp
			20					25					30		
Gly	Gly	Ile	Glu	Gln	Met	Gly	Leu	Ala	Met	Glu	His	Gly	Gly	Ser	Tyr

		35					40					45				
Ala	Arg	Ala	Gly	Gly	Ser	Ser	Arg	Gly	Cys	Trp	Tyr	Tyr	Leu	Arg	Tyr	
	50					55					60					
Phe	Phe	Leu	Phe	Val	Ser	Leu	Ile	Gln	Phe	Leu	Ile	Ile	Leu	Gly	Leu	
65					70					75					80	
Val	Leu	Phe	Met	Val	Tyr	Gly	Asn	Val	His	Val	Ser	Thr	Glu	Ser	Asn	
				85					90					95		
Leu	Gln	Ala	Thr	Glu	Arg	Arg	Ala	Glu	Gly	Leu	Tyr	Ser	Gln	Leu	Leu	
			100					105					110			
Gly	Leu	Thr	Ala	Ser	Gln	Ser	Asn	Leu	Thr	Lys	Glu	Leu	Asn	Phe	Thr	
		115					120					125				
Thr	Arg	Ala	Lys	Asp	Ala	Ile	Met	Gln	Met	Trp	Leu	Asn	Ala	Arg	Arg	
	130					135					140					
Asp	Leu	Asp	Arg	Ile	Asn	Ala	Ser	Phe	Arg	Gln	Cys	Gln	Gly	Asp	Arg	
145					150					155					160	
Val	Ile	Tyr	Thr	Asn	Asn	Gln	Arg	Tyr	Met	Ala	Ala	Ile	Ile	Leu	Ser	
				165					170					175		
Glu	Lys	Gln	Cys	Arg	Asp	Gln	Phe	Lys	Asp	Met	Asn	Lys	Ser	Cys	Asp	
			180					185					190			
Ala	Leu	Leu	Phe	Met	Leu	Asn	Gln	Lys	Val	Lys	Thr	Leu	Glu	Val	Glu	
		195					200					205				
Ile	Ala	Lys	Glu	Lys	Thr	Ile	Cys	Thr	Lys	Asp	Lys	Glu	Ser	Val	Leu	
	210					215					220					
Leu	Asn	Lys	Arg	Val	Ala	Glu	Glu	Gln	Leu	Val	Glu	Cys	Val	Lys	Thr	
225					230					235					240	
Arg	Glu	Leu	Gln	His	Gln	Glu	Arg	Gln	Leu	Ala	Lys	Glu	Gln	Leu	Gln	
				245					250					255		
Lys	Val	Gln	Ala	Leu	Cys	Leu	Pro	Leu	Asp	Lys	Asp	Lys	Phe	Glu	Met	
			260					265					270			
Asp	Leu	Arg	Asn	Leu	Trp	Arg	Asp	Ser	Ile	Ile	Pro	Arg	Ser	Leu	Asp	
		275					280					285				
Asn	Leu	Gly	Tyr	Asn	Leu	Tyr	His	Pro	Leu	Gly	Ser	Glu	Leu	Ala	Ser	
		290				295					300					
Ile	Arg	Arg	Ala	Cys	Asp	His	Met	Pro	Ser	Leu	Met	Ser	Ser	Lys	Val	
305					310					315					320	
Glu	Glu	Leu	Ala	Arg	Ser	Leu	Arg	Ala	Asp	Ile	Glu	Arg	Val	Ala	Arg	
				325					330					335		
Glu	Asn	Ser	Asp	Leu	Gln	Arg	Gln	Lys	Leu	Glu	Ala	Gln	Gln	Gly	Leu	
			340					345					350			
Arg	Ala	Ser	Gln	Glu	Ala	Lys	Gln	Lys	Val	Glu	Lys	Glu	Ala	Gln	Ala	
		355					360					365				
Arg	Glu	Ala	Lys	Leu	Gln	Ala	Glu	Cys	Ser	Arg	Gln	Thr	Gln	Leu	Ala	
	370					375					380					
Leu	Glu	Glu	Lys	Ala	Val	Leu	Arg	Lys	Glu	Arg	Asp	Asn	Leu	Ala	Lys	
385					390											

465

470

475

<210> 3837

<211> 2084

<212> DNA

<213> Homo sapiens

<400> 3837

nagaggaggc ttttctctgg tgcttggcag atgcatgaag agactgatgg catgtggact
60
attcagaaaa ctgtggcaca ctgttgggtg caagggtgacc ttatgagatg ggctgacagt
120
ggggactgcc aactcatgtg tctgttttagc tcaccttttc ctgtgccccat cctccaaccc
180
cccaaccatg tgggaaggaa atgtttggcc ctctgaccct aactacatcc cacagactgg
240
gatggaaagg tgtctgagat taagaagaag atcaagtcga tcctgcctgg aagggtcctgt
300
gatctactgc aagacaccag ccacctgcct cccgagcact cggatgtggt gatcgtggga
360
gggtgggggtgc ttggcttgtc tgtggcctat tggctgaaga agctggagag cagacgaggt
420
gctattcgag tgctagtggg ggaacgggac cacacgtatt cacaggcctc caccgggctc
480
tcagtaggtg ggattttgtca gcagttctca ttgcctgaga acatccagct ctccctcttt
540
tcagccagct ttctacggaa catcaatgag tacctggccg tagtcgatgc tcctccctg
600
gacctccggt tcaaccctc gggctacctc ttgctggctt cagaaaagga tgctgcagcc
660
atggagagca acgtgaaagt gcagaggcag gagggagcca aagtttctct gatgtctcct
720
gatcagcttc ggaacaagtt tccctggata aacacagagg gagtggcttt ggcgtcttat
780
gggatggagg acgaaggttg gtttgacccc tgggtgtctgc tccaggggct tcggcgaaag
840
gtccagtcct tgggagtcct tttctgccag ggagaggtga cacgttttgt ctcttcatct
900
caacgcatgt tgaccacaga tgacaaagcg gtggtcttga aaaggatcca tgaagtccat
960
gtgaagatgg accgcagcct ggagtaccag cctgtggaat gcgccattgt gatcaacgca
1020
gccggagcct ggtctgcgca aatcgagca ctggctggtg ttggagaggg gccgcctggc
1080
accctgcagg gcaccaagct acctgtggag ccgaggaaaa ggtatgtgta tgtgtggcac
1140
tgcccccagg gaccaggcct agagactccg cttgttgag acaccagtgg agcctatctt
1200
cgccgggaag gattaggtag caactaccta ggtggtcgta gccccactga gcaggaagaa
1260
ccggacccgg cgaacctgga agtggacat gatctcttcc aggacaaggt gtggccccat
1320
ttggccctga gggctccagc ttttgagact ctgaagtgtt ttgtgcaccc gcaggttcag
1380

agcgctggg cgggtatta cgactacaac acctttgacc agaatggcgt ggtgggcccc
 1440
 caccgctag ttgtcaacat gtactttgct actggcttca gtggtcacgg gctccagcag
 1500
 gccctggca ttgggcgagc tgtagcagag atggtactga agggcagggt ccagaccatc
 1560
 gacctgagcc ccttcctctt taccgcgtt tacttgggag agaagatcca ggagaacaac
 1620
 atcatctgag catgtgtgct ctgcactggc tccactggct tgcacacctg ctgtgttcac
 1680
 agccttggtt gctgcttcca tcttccccag tactgtgcca ggccttctcc ccctccccag
 1740
 tgctctctcc tctcaggcag gccattgcac ccatatggct gggcaggcac aggcagtgag
 1800
 gccgaggcca atagcgagt atgagcgga tcctaggact gatctgtagc ccatgctgat
 1860
 gtcaccacc agggcaatcc atctggaggc ctgagcacc tggcccagga ctggcttcat
 1920
 cctggcactg accaggaaag actgcctctg accctcttag cagacagagc ccaggcatgg
 1980
 gagcactctg gggcagcctg gctcagggtt attgatttcc gtctgtttac cctatccatt
 2040
 aatcaatata tgtaattaac tccttcaaaa aaaaaaaaaa aaaa
 2084

<210> 3838

<211> 468

<212> PRT

<213> Homo sapiens

<400> 3838

Leu	His	Pro	Thr	Asp	Trp	Asp	Gly	Lys	Val	Ser	Glu	Ile	Lys	Lys	Lys
1				5					10					15	
Ile	Lys	Ser	Ile	Leu	Pro	Gly	Arg	Ser	Cys	Asp	Leu	Leu	Gln	Asp	Thr
			20					25					30		
Ser	His	Leu	Pro	Pro	Glu	His	Ser	Asp	Val	Val	Ile	Val	Gly	Gly	Gly
		35					40					45			
Val	Leu	Gly	Leu	Ser	Val	Ala	Tyr	Trp	Leu	Lys	Lys	Leu	Glu	Ser	Arg
	50					55					60				
Arg	Gly	Ala	Ile	Arg	Val	Leu	Val	Val	Glu	Arg	Asp	His	Thr	Tyr	Ser
65					70				75						80
Gln	Ala	Ser	Thr	Gly	Leu	Ser	Val	Gly	Gly	Ile	Cys	Gln	Gln	Phe	Ser
				85				90						95	
Leu	Pro	Glu	Asn	Ile	Gln	Leu	Ser	Leu	Phe	Ser	Ala	Ser	Phe	Leu	Arg
			100					105					110		
Asn	Ile	Asn	Glu	Tyr	Leu	Ala	Val	Val	Asp	Ala	Pro	Pro	Leu	Asp	Leu
		115					120					125			
Arg	Phe	Asn	Pro	Ser	Gly	Tyr	Leu	Leu	Leu	Ala	Ser	Glu	Lys	Asp	Ala
	130					135						140			
Ala	Ala	Met	Glu	Ser	Asn	Val	Lys	Val	Gln	Arg	Gln	Glu	Gly	Ala	Lys
145					150					155					160
Val	Ser	Leu	Met	Ser	Pro	Asp	Gln	Leu	Arg	Asn	Lys	Phe	Pro	Trp	Ile
				165					170					175	
Asn	Thr	Glu	Gly	Val	Ala	Leu	Ala	Ser	Tyr	Gly	Met	Glu	Asp	Glu	Gly

180 185 190
 Trp Phe Asp Pro Trp Cys Leu Leu Gln Gly Leu Arg Arg Lys Val Gln
 195 200 205
 Ser Leu Gly Val Leu Phe Cys Gln Gly Glu Val Thr Arg Phe Val Ser
 210 215 220
 Ser Ser Gln Arg Met Leu Thr Thr Asp Asp Lys Ala Val Val Leu Lys
 225 230 235 240
 Arg Ile His Glu Val His Val Lys Met Asp Arg Ser Leu Glu Tyr Gln
 245 250 255
 Pro Val Glu Cys Ala Ile Val Ile Asn Ala Ala Gly Ala Trp Ser Ala
 260 265 270
 Gln Ile Ala Leu Ala Gly Val Gly Glu Gly Pro Pro Gly Thr Leu
 275 280 285
 Gln Gly Thr Lys Leu Pro Val Glu Pro Arg Lys Arg Tyr Val Tyr Val
 290 295 300
 Trp His Cys Pro Gln Gly Pro Gly Leu Glu Thr Pro Leu Val Ala Asp
 305 310 315 320
 Thr Ser Gly Ala Tyr Phe Arg Arg Glu Gly Leu Gly Ser Asn Tyr Leu
 325 330 335
 Gly Gly Arg Ser Pro Thr Glu Gln Glu Glu Pro Asp Pro Ala Asn Leu
 340 345 350
 Glu Val Asp His Asp Phe Phe Gln Asp Lys Val Trp Pro His Leu Ala
 355 360 365
 Leu Arg Val Pro Ala Phe Glu Thr Leu Lys Cys Phe Val His Pro Gln
 370 375 380
 Val Gln Ser Ala Trp Ala Gly Tyr Tyr Asp Tyr Asn Thr Phe Asp Gln
 385 390 395 400
 Asn Gly Val Val Gly Pro His Pro Leu Val Val Asn Met Tyr Phe Ala
 405 410 415
 Thr Gly Phe Ser Gly His Gly Leu Gln Gln Ala Pro Gly Ile Gly Arg
 420 425 430
 Ala Val Ala Glu Met Val Leu Lys Gly Arg Phe Gln Thr Ile Asp Leu
 435 440 445
 Ser Pro Phe Leu Phe Thr Arg Phe Tyr Leu Gly Glu Lys Ile Gln Glu
 450 455 460
 Asn Asn Ile Ile
 465

<210> 3839

<211> 758

<212> DNA

<213> Homo sapiens

<400> 3839

nnacgcgtgc aggactctct ggaagtcacc cttcccagca aacaagagga ggaggatgag
 60
 gaggaggagg aggaggagaa agaccagcct gccgagatgg agtaccttaa ctctcgctgt
 120
 gtccttttca cttattttcca gggagacatt gggtcagtag tggatgaaca cttctcaaga
 180
 gctttgggcc aagccatcac cctccatcca gaatctgcca tttcaaaaag caagatgggg
 240
 ctaaccccc tatggcgaga cagctcagct ctctcaagcc agcggaatag tttcccaact
 300

tccttttggga ccagctctta ccagccccc cctgcacctt gtttgggggg agttcatcct
 360
 gacttccagg tcaactggacc cctgggcacc ttttctgcag ctgatcccag tccttggccg
 420
 ggacacaacc tgcacagac tggcccagcc cctccccctg ctgtgtctga gtccctggcct
 480
 tatcctttga catctcaggt gagcccatcc tacagccata tgcacgacgt gtacatgcgg
 540
 caccaccacc ctcatgccc catgcaccac cgccaccgcc accatcatca ccatcaccac
 600
 cctcctgctg gctctgcct ggatccatcc tatgggcctc tgctgatgcc ttcagtgcac
 660
 gcggccagga ttctgtctcc ccagtgtgac atcacaaga cagaaccaac tacagtcacc
 720
 tctgctacct cagcatgggc tggagccttt catggaac
 758

<210> 3840

<211> 252

<212> PRT

<213> Homo sapiens

<400> 3840

Xaa	Arg	Val	Gln	Asp	Ser	Leu	Glu	Val	Thr	Leu	Pro	Ser	Lys	Gln	Glu
1				5					10					15	
Glu	Glu	Asp	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Lys	Asp	Gln	Pro	Ala	Glu
			20						25				30		
Met	Glu	Tyr	Leu	Asn	Ser	Arg	Cys	Val	Leu	Phe	Thr	Tyr	Phe	Gln	Gly
		35					40					45			
Asp	Ile	Gly	Ser	Val	Val	Asp	Glu	His	Phe	Ser	Arg	Ala	Leu	Gly	Gln
	50					55					60				
Ala	Ile	Thr	Leu	His	Pro	Glu	Ser	Ala	Ile	Ser	Lys	Ser	Lys	Met	Gly
65					70					75				80	
Leu	Thr	Pro	Leu	Trp	Arg	Asp	Ser	Ser	Ala	Leu	Ser	Ser	Gln	Arg	Asn
				85					90					95	
Ser	Phe	Pro	Thr	Ser	Phe	Trp	Thr	Ser	Ser	Tyr	Gln	Pro	Pro	Pro	Ala
			100					105					110		
Pro	Cys	Leu	Gly	Gly	Val	His	Pro	Asp	Phe	Gln	Val	Thr	Gly	Pro	Pro
		115					120					125			
Gly	Thr	Phe	Ser	Ala	Ala	Asp	Pro	Ser	Pro	Trp	Pro	Gly	His	Asn	Leu
	130					135					140				
His	Gln	Thr	Gly	Pro	Ala	Pro	Pro	Pro	Ala	Val	Ser	Glu	Ser	Trp	Pro
145					150					155				160	
Tyr	Pro	Leu	Thr	Ser	Gln	Val	Ser	Pro	Ser	Tyr	Ser	His	Met	His	Asp
				165					170					175	
Val	Tyr	Met	Arg	His	His	His	Pro	His	Ala	His	Met	His	His	Arg	His
		180						185					190		
Arg	His	His	His	His	His	His	His	Pro	Pro	Ala	Gly	Ser	Ala	Leu	Asp
		195					200					205			
Pro	Ser	Tyr	Gly	Pro	Leu	Leu	Met	Pro	Ser	Val	His	Ala	Ala	Arg	Ile
	210					215					220				
Pro	Ala	Pro	Gln	Cys	Asp	Ile	Thr	Lys	Thr	Glu	Pro	Thr	Thr	Val	Thr
225					230					235				240	
Ser	Ala	Thr	Ser	Ala	Trp	Ala	Gly	Ala	Phe	His	Gly				

245

250

<210> 3841
 <211> 367
 <212> DNA
 <213> Homo sapiens

<400> 3841
 ctgggaactc cccacacttc cgtgggcaac atcttgggggt cattgatcgc tggctactgg
 60
 gtgtccacat gctggggcct gtctttcgtc gtgcctggag ccatcgtggc agccatgggg
 120
 atagtgtgct ttctcttcct cattgaacat ccgaacgacg tcaggtgctc ctccaccctg
 180
 gtgacgcact caaaaggcta tgagaatggg acaaacagggt tgagcctccc gaagccaatc
 240
 ttgaagagcg aaaagaacaa gcctctggac ccagagatgc agtgcttgcct gctctcagat
 300
 gggaaggggt ccatccaccc gaaccacgtc gtcattctcc ccgggggacgg tgggagtggc
 360
 ccggccg
 367

<210> 3842
 <211> 122
 <212> PRT
 <213> Homo sapiens

<400> 3842
 Leu Gly Thr Pro His Thr Ser Val Gly Asn Ile Leu Gly Ser Leu Ile
 1 5 10 15
 Ala Gly Tyr Trp Val Ser Thr Cys Trp Gly Leu Ser Phe Val Val Pro
 20 25 30
 Gly Ala Ile Val Ala Ala Met Gly Ile Val Cys Phe Leu Phe Leu Ile
 35 40 45
 Glu His Pro Asn Asp Val Arg Cys Ser Ser Thr Leu Val Thr His Ser
 50 55 60
 Lys Gly Tyr Glu Asn Gly Thr Asn Arg Leu Ser Leu Pro Lys Pro Ile
 65 70 75 80
 Leu Lys Ser Glu Lys Asn Lys Pro Leu Asp Pro Glu Met Gln Cys Leu
 85 90 95
 Leu Leu Ser Asp Gly Lys Gly Ser Ile His Pro Asn His Val Val Ile
 100 105 110
 Leu Pro Gly Asp Gly Gly Ser Gly Pro Ala
 115 120

<210> 3843
 <211> 712
 <212> DNA
 <213> Homo sapiens

<400> 3843
 ngctgtccgg cccgcagggc ggctcgaggtg ggaacggagc agccccgggg gcccccctga
 60

ggcggcgagg ccgcgaaggg cgcggggctg gaggcccgcg gcgccatggc tcacgtcggc
 120
 tcccgaagc gctcgaggag tcgcagccgg tcccggggac gggggtcgga aaagagaaag
 180
 aagaagagca ggaaagacac ctgcaggaac tgctcggcct ccacatccca aggtcgcaag
 240
 gccagcacgg cccctggggc ggaggcctca cttctcctct gcatcacaga gagaagcaag
 300
 cagaaggccc ggaggagAAC aagatccagc tcctcctcct cttcttccag ttcttctagc
 360
 tcctcttctt cctcctcgtc ctctcctctt tcctccagtg atggccggaa gaagcggggg
 420
 aagtacaagg acaagaggag gaagaagaag aagaagagga agaagctgaa gaagaagggc
 480
 aaggagaagg cggaagcaca gcaggcagag catcatccgc aagggtggtg accctgagac
 540
 ggggcgcacc aggcttatta agggagatgg cgaggctcta gaggaaatcg taaccaaaaga
 600
 acgacacaga gagatcaaca agcaagccac ccgaggggac tgcttggcct tccagatgcg
 660
 agctggggtg cttctgagg gccccgctgg caaggctgtg gacgacgctg gc
 712

<210> 3844

<211> 143

<212> PRT

<213> Homo sapiens

<400> 3844

Met	Ala	His	Val	Gly	Ser	Arg	Lys	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Ser	1	5	10	15
Arg	Gly	Arg	Gly	Ser	Glu	Lys	Arg	Lys	Lys	Lys	Ser	Arg	Lys	Asp	Thr	20	25	30	
Ser	Arg	Asn	Cys	Ser	Ala	Ser	Thr	Ser	Gln	Gly	Arg	Lys	Ala	Ser	Thr	35	40	45	
Ala	Pro	Gly	Ala	Glu	Ala	Ser	Pro	Ser	Pro	Cys	Ile	Thr	Glu	Arg	Ser	50	55	60	
Lys	Gln	Lys	Ala	Arg	Arg	Arg	Thr	Arg	Ser	Ser	Ser	Ser	Ser	Ser	Ser	65	70	75	80
Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	85	90	95	
Ser	Ser	Asp	Gly	Arg	Lys	Lys	Arg	Gly	Lys	Tyr	Lys	Asp	Lys	Arg	Arg	100	105	110	
Lys	Lys	Lys	Lys	Lys	Arg	Lys	Lys	Leu	Lys	Lys	Lys	Gly	Lys	Glu	Lys	115	120	125	
Ala	Glu	Ala	Gln	Gln	Ala	Glu	His	His	Pro	Gln	Gly	Gly	Gly	Pro		130	135	140	

<210> 3845

<211> 2302

<212> DNA

<213> Homo sapiens

<400> 3845

nacgcgtggt tctgctgggc cttgggttttg gctacttggga tccgctggtc cccacagacc
60
agccccgcag tacctgctgt gccccggctc aagcgggggtg gagaacacgg agctcgtcaa
120
gtcaccacgt gagtacctga tgatgctgat gccaccacgc caggaggagg agaaagacaa
180
gcctgtggcc cccagcaacg tcctgtcgat ggcccagctg cgcacgctgc ccctggccga
240
tcagatcaag atcctgatga agaattgtgaa ggtcatgcct ttgccaact tgatgagcct
300
cctgggcccc tccatcgatt ccgtggctgt tctgcggggc atccagaagg tggcgatgtt
360
ggtccaaggg aactgggtgg tgaagagtga catcctatac cccaaggact cgtccagccc
420
tcacagcggc gtgcctgctg aggtgctctg caggggcccga gacttcgtta tgtggaagtt
480
cacgcagagc cgctgggtgg ttaggaaaga ggtggcaacc gtgaccaaac tctgcgccga
540
ggatgtgaag gacttcctgg agcacatggc cgtgggtgagg atcaacaaag gctgggagtt
600
cattctgcct tatgatgggg agttcatcaa gaagcacccg gatgtggtcc agcggcagca
660
catgctgtgg acgggtatcc aggccaaact ggaaaaagtc tataatcttg taaaggaaac
720
catgccaaag aagccggatg cacaatcagg gcctgccggg ctggctctgtg gggaccagcg
780
gatccaagta gccaaaacca aggcccagca gaaccacgcg ttgctggagc gggagctgca
840
gcggcggaag gagcagctgc gggtgctgc ggtcccgcgc ggtgtgcgga tcaaggagga
900
gcccgtagc gaggagggcg aggaggacga ggagcaggag gcggaggagg agcccatgga
960
cacttcccc agcggcctcc acagcaagct ggccaacggg ctgcctctcg ggcgggctgc
1020
gggcacagac agcttcaacg ggcacccgcc ccagggtctg gccagcacc ctgtggctcg
1080
ggaactgaag gccttcgtgg aggccacctt tcagagacag ttgtgtctca cgtgagcga
1140
actcaagcgc ctcttcaatc tgcacttggc cagcctgcc cccggccaca cactcttcag
1200
cggcatctcg gaccgcatgc tacaggacac ggtgctggcc gccggttgca agcagatact
1260
ggtgcctttt cccccccaga ctgtgcttc cccggatgag cagaagggtg ttgcctctg
1320
ggagtctgga gacatgagt atcagcatcg acaggttttg cttgaaattt tttccaaaaa
1380
ttaccgggta cgccgaaaca tgatccagtc tcggttgact caagagtgtg gagaagatct
1440
cagtaaacag gaggtggata aagtactaaa ggactgctgt gtaagctatg gtggcatgtg
1500
gtaccttaaa gggacagtac agtcttgaca atagtagcaa actactaacc cagcaaatct
1560
aagcccaagg aagaaggcg gaaccagaag tagggcctcg acttgcttca gacgacacag
1620

agcaagagga actgaccatc tcatgacctg tggcattgca cgggtgcagtg gacagaaggg
 1680
 attatcctca gccagtcgca gggtcagctt aagttagtta gatcactccc agaagagacc
 1740
 agctgggacc ttctttgcag tacaatttga aattcctgat gtattttgct tattatttgg
 1800
 tttcattctc ataataaaga gagtgtatac ttacatgggc aggatgataa aaatcatggg
 1860
 ttaatatattt cttttgtaaa cttaatgcc acaagggtcta agttatgttt acaacatgaa
 1920
 gaaaacctca aagttcttaa tttttaaaat gcctagaaga caatatttag tcttggatta
 1980
 tctatctgct aagacctcca ccaatttcat taaaccaa at tgaattattc tattcttggg
 2040
 attctgtggc cacttcacct ttgacaacaa cctactttat gtagcagtct caactgttta
 2100
 catgaaccat agcaaaaaaa tcagaatcaa atccatctcc ttttaatgtt tgcagaaaga
 2160
 tgcaaacaaa accaggttaag tatggaacaa tgtgtaagt aggttatcac actttgatgt
 2220
 aaaaatttct attttgtgta tttttaaaat aaatgcaa ac actaaactaa aaaaaaaaaa
 2280
 aaaaaaaaaa aaaaaaaaaa aa
 2302

<210> 3846

<211> 197

<212> PRT

<213> Homo sapiens

<400> 3846

Ser	Cys	Lys	Gly	Asn	His	Ala	Lys	Glu	Ala	Gly	Cys	Thr	Ile	Arg	Ala
1				5					10					15	
Cys	Arg	Ala	Gly	Leu	Trp	Gly	Pro	Ala	Asp	Pro	Ser	Ser	Gln	Asn	Gln
			20					25					30		
Gly	Pro	Ala	Glu	Pro	Arg	Val	Ala	Gly	Ala	Gly	Ala	Ala	Ala	Ala	Glu
		35					40					45			
Gly	Ala	Ala	Ala	Gly	Ala	Cys	Gly	Pro	Ala	Arg	Cys	Ala	Asp	Gln	Gly
	50				55						60				
Gly	Ala	Arg	Glu	Arg	Gly	Gly	Arg	Gly	Gly	Arg	Gly	Ala	Gly	Gly	Gly
65				70					75					80	
Gly	Gly	Ala	His	Gly	His	Phe	Pro	Gln	Arg	Pro	Pro	Gln	Gln	Ala	Gly
			85						90					95	
Gln	Arg	Ala	Ala	Ser	Arg	Ala	Gly	Cys	Gly	His	Arg	Gln	Leu	Gln	Arg
			100					105					110		
Ala	Pro	Ala	Pro	Gly	Leu	Arg	Gln	His	Pro	Cys	Gly	Ser	Gly	Thr	Glu
		115					120					125			
Gly	Leu	Arg	Gly	Gly	His	Leu	Ser	Glu	Thr	Val	Cys	Ala	His	Ala	Glu
	130					135					140				
Arg	Thr	Gln	Ala	Pro	Leu	Gln	Ser	Ala	Leu	Gly	Gln	Pro	Ala	Pro	Arg
145					150					155				160	
Pro	His	Thr	Leu	Gln	Arg	His	Leu	Gly	Pro	His	Ala	Thr	Gly	His	Gly
			165					170					175		
Ala	Gly	Arg	Arg	Leu	Gln	Ala	Asp	Thr	Gly	Ala	Phe	Ser	Pro	Pro	Asp

180
Cys Cys Phe Pro Gly
195

185

190

<210> 3847
<211> 1570
<212> DNA
<213> Homo sapiens

<400> 3847
nnccatggtg ggcttgaggg tggggctgtc ctagagcatt aaacagctgt tgggccctgg
60
gctgaccccc ccaccctgca tgtgtggggg tccccacagc tcttatgttc ctcttggggc
120
ttctggaatt cctcctcctt aggcaagcct atcacagcat cctgaccctg ggggcctctg
180
tgcagctggt gtttggcttt gaggtaaaac tggttggga ggttgagagg acaagccga
240
ggtgacccca catgtgcctt gaataaccca acagaccctt cctcagcacc tgctatgtgg
300
ccaacctgtg ctggccacca aggggcagtg atcagatatg gctcctgccc tccacacgct
360
cactcctagg tgactgggga gacgcacaaa gaggctagga cagaggagga gcccacacct
420
ggggctcagg agagggttcc tggaggetcg tgccggagct agctggtaat ggacaggaga
480
ggattagttc catggacaac tggaggcgtg tccctggcag agagagaatg tgttcagtga
540
cgacagctca tatttgttga gtgcgaattt cacaccaggc cctatgctga gctcctgacc
600
tgcattctctt attcagcaag acaatactgt tataaaggaa cagttaatta tgtcatttta
660
tagataagta aactgaggtt cactgagttg ccaaaagtca cagctagtaa gtggaggggg
720
taggaggacc ctgggtgtgt ctagagcctg tgattgtacc actgcacctg ctgtgcagag
780
gccttgggga gcaatgtggg tgcagcaagg gggagctatg tgtttacatc cccctcgtec
840
ccctctccct tcagtatgcc atcctgatga cgatggtgct caccatcttc atcaagtatg
900
tgctgcactc cgtggacctc cagagtgaga acccctggga caacaaggct gtgtacatgc
960
tctacacaga gctgtttaca ggtgagaggg gcctgggcct ctctgatct ggaccagcat
1020
cctccactct gcctcctggc cctgtgacct gctgctttct gcatccctc ccctcaggct
1080
tcatcaaggt tctgctgtac atggccttca tgaccatcat gatcaagggt cacaccttc
1140
cactctttgc catccggccc atgtacctgg ccatgaggtg agcccgggcc tgtccccga
1200
tcctcctgac ctgatccctg cccttctcct gctttcactg actgtccttt cagacagttc
1260
aagaaagctg tgacagatgc catcatgtct cgccgagcca tccgcaacat gaacaccctg
1320

tatccagatg ccaccccaga ggagctccag gcaatggaca atgtctgcat catctgccga
 1380
 gaagagatgg tgactggtgc caagagactg ccctgcaacc acattttcca taccaggtgg
 1440
 gagggggcct ggggagcctg cccagcaggg cccaggcccc agaaggcagg ccctaaggga
 1500
 cctgctgacc tctgcctggc cttgaccgcg agctgcctgc gctcctgggt ccagcggcag
 1560
 cagacctgcc
 1570

<210> 3848

<211> 120

<212> PRT

<213> Homo sapiens

<400> 3848

Pro	Asp	Pro	Val	Pro	Ser	Pro	Ala	Phe	Thr	Asp	Cys	Pro	Phe	Arg	Gln
1				5					10					15	
Phe	Lys	Lys	Ala	Val	Thr	Asp	Ala	Ile	Met	Ser	Arg	Arg	Ala	Ile	Arg
			20					25					30		
Asn	Met	Asn	Thr	Leu	Tyr	Pro	Asp	Ala	Thr	Pro	Glu	Glu	Leu	Gln	Ala
	35						40					45			
Met	Asp	Asn	Val	Cys	Ile	Ile	Cys	Arg	Glu	Glu	Met	Val	Thr	Gly	Ala
	50					55					60				
Lys	Arg	Leu	Pro	Cys	Asn	His	Ile	Phe	His	Thr	Arg	Trp	Glu	Gly	Pro
65					70					75				80	
Trp	Gly	Ala	Cys	Pro	Ala	Gly	Pro	Arg	Pro	Gln	Lys	Ala	Gly	Pro	Lys
			85						90					95	
Gly	Pro	Ala	Asp	Leu	Cys	Leu	Ala	Leu	Thr	Arg	Ser	Cys	Leu	Arg	Ser
			100					105						110	
Trp	Phe	Gln	Arg	Gln	Gln	Thr	Cys								
		115					120								

<210> 3849

<211> 1139

<212> DNA

<213> Homo sapiens

<400> 3849

cctgccgagg gccaggaatg agattaagga cggaacgcat gccctccaaa aagtggcatt
 60
 ttagaattta tacagcacc cagcacgctg ctaaactgtg gcacacaacc accacggccc
 120
 gatcacgcgc agcgggaacc cggctctctga gtccgccccg tgcgttgctg catcagagtc
 180
 acgccaccta atccattctc tcggtcttcg tctgctccgg tattgcaact gcctcgattg
 240
 gtcgatcctg ggccagcatg gcggcgccca tgtaaccggg tccgtgccgc aaagcgaacg
 300
 gcggccgcgg cgcgggcccc gcgggggtta gaggtcacca tgctgagggg cgcgtggagg
 360
 acgctgagtt tgattcggac ccgggcagtt acccaggtcc tagtaccggg gctgccgggc
 420